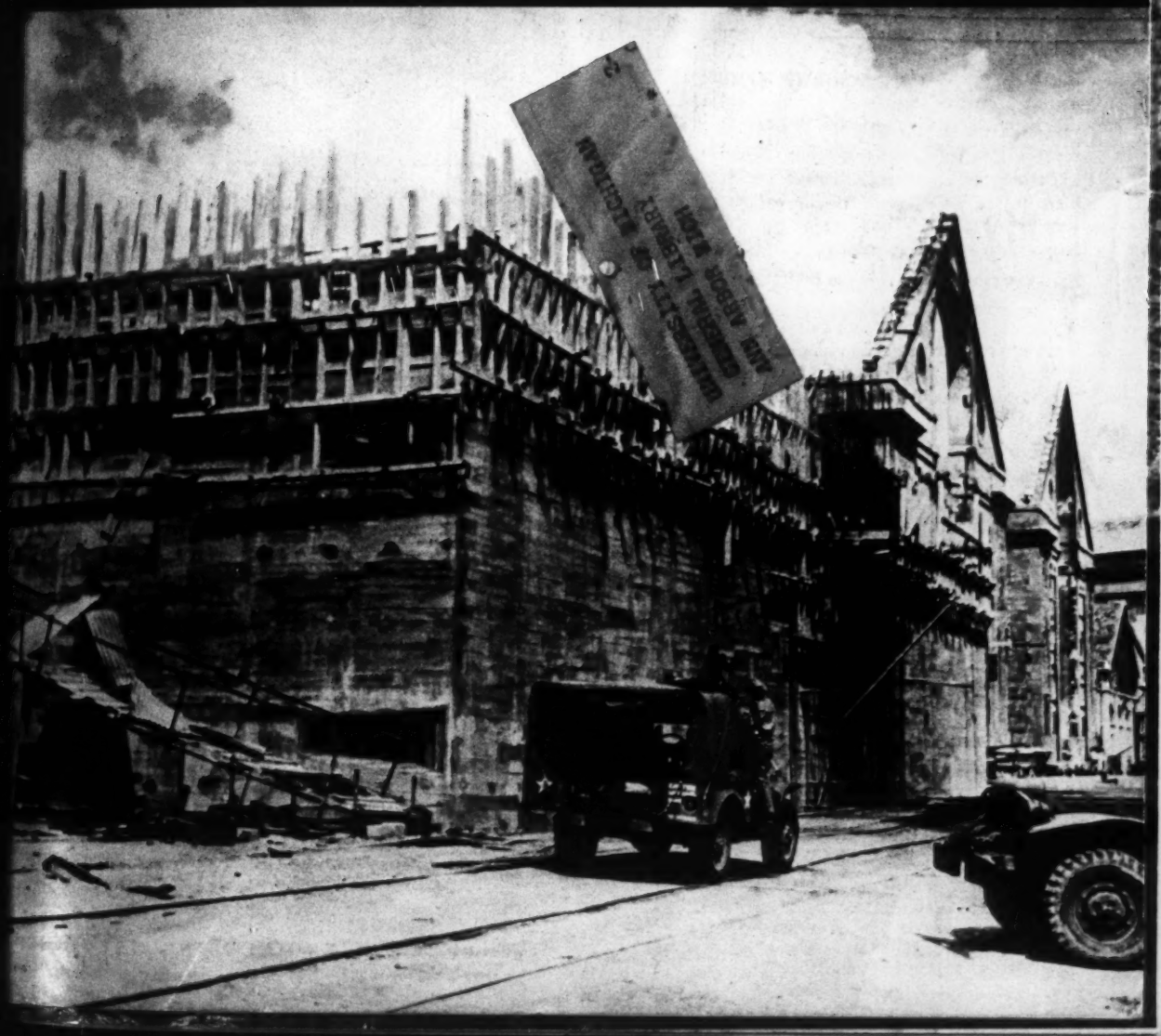
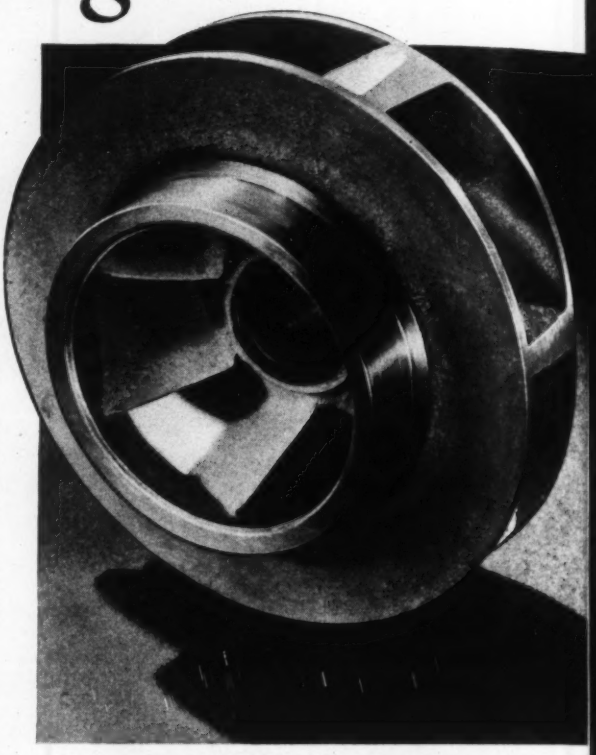
ENGINEERING NEWS-RECORD

Unfinished German submarine pen captured when Cherbourg fell



PUMP TIPS FROM ALLIS-CHALMERS—ONE IN A SERIES

How to make IMPELLERS Last Longer . . .



Impellers for Allis-Chalmers "Electrifugal" pumps are supplied in bronze, stainless steel, monel metal or other materials — depending upon the *exact nature* of the liquid to be pumped.

CLEARANCES between moving and stationary parts in a centrifugal pump are very small. And when pump and its driving motor are not correctly aligned or weight of piping puts undue strain on casing, every revolution of the shaft throws tremendous extra load and extra wear on all moving parts.

In the case of pumps designed with wearing rings which are attached to the casing, misalignment causes greatly accelerated wear on both rings and impeller — reducing the effective life of both.

In an effort to eliminate the misalignment problem, A-C engineers developed, for many applications, the "Electrifugal" pump — in which *both* impeller and motor are mounted on *one* shaft and in *one* frame. In such a pump the elements cannot get out of line. Result: wear on all moving parts is greatly reduced.

Besides misalignment, there are still other factors contributing to impeller wear. Regardless of type of pumps you have, here are a few tips which can help you get longer life out of impellers . . .

▸ An often overlooked cause of impeller wear is cavitation. For if pump capacity, speed, head and suction lift aren't figured properly, cavitation can eat an impeller away fast. Here's what happens: Rapid movement of impeller blade through liquid produces a cavity behind blade; local high pressure increase drives liquid into metal with terrific force! Moral: Be sure head is right for your pump.

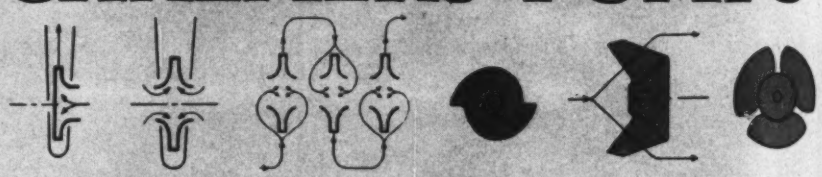
▸ If foreign matter is being sucked into your pump it can clog or wear impeller unduly. Where this condition exists, provide the intake end of suction piping with a suitable screen.

▸ When you dismantle your pumps (at least once a year), inspect impellers. If they are damaged or blade sections are corroded replace them, but *first* make a thorough search into the possible *causes* for the condition.

▸ If you haven't already done so, send for your *free* copy of "Handbook for Wartime Care of Centrifugal Pumps". This valuable booklet is packed with worthwhile information. Applies to *all* makes of pumps; contains *no* advertising. ALLIS-CHALMERS, MILWAUKEE 1, WIS. A 1688

ALLIS-CHALMERS PUMPS

Allis-Chalmers builds all types and variations of pumps shown at right. Capacities from 10 to 150,000 gpm—heads to 2500 lbs.



The Week In Engineering and Construction

ENGINEERING NEWS-RECORD • AUGUST 3, 1944 • VOLUME 133 • NUMBER 5

House committee begins hearings on postwar plans

Subcommittee of Special Committee on Postwar Economic Policy and Planning get plea from mayor of New York for federal aid for postwar public work

Hearings on postwar public-works plans were begun on July 27 at New York by a subcommittee of the Special Committee on Postwar Economic Policy and Planning of the House of Representatives. Among those who were heard were Malcolm Pirnie, president, American Society of Civil Engineers, Mayor La Guardia of New York, the presidents of the principal boroughs of New York, and Robert Moses, chairman of the New York City Park Commission.

Federal aid requested

Mayor La Guardia favored a federal public-works program of at least $40 billion to finance half the cost of projects other than land. He also urged that the federal government act quickly to finance 75 percent of the cost of planning the postwar public works.

Robert Moses held that the federal government had made widespread unemployment probable by its failure to provide a flexible public works program which could be used in any locality when unemployment develops. He doubts that private companies can employ people quickly following the war, hence he recommended a $15 billion public-works program for the three-year period following the war. This would include $3 billion for highways.

Mayor La Guardia said that New York is ready to spend $1,270,000,000 on public work, adding that the city has $223,000,000 available to finance the city's share.

A.S.C.E. program

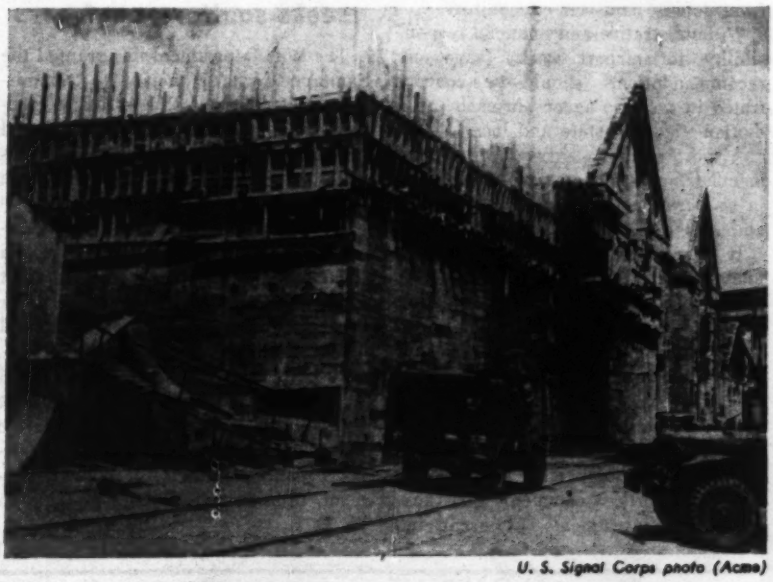
Malcolm Pirnie outlined for the committee the postwar construction plans of the American Society of Civil Engineers, stating that under the society's Committee on Postwar Construction a full-time division of research and development had been set up, which is using statistics compiled by *Engineering News-Record* to keep in touch with progress in advancing postwar plans to the contract stage. He said that the society had set as its objective the completion of plans, specifications and contracts for $15 billion of work before the end of the war, of which roughly two-thirds will be in the engineered construction class. Five billion of this would be private construction and five billion public work. The remaining third would be small house construction.

Little private work

Mr. Pirnie pointed out that only 2¼ percent of the desired volume of private work had been reported by *ENR* up to July 7 as against 63 percent of the volume of the public work. Granting less efficient coverage of the private work, said Mr. Pirnie, it still is evident that some incentive is needed to stimulate private concerns to plan for a much greater volume of private work. To this end, Mr. Pirnie suggested that private builders be permitted to deduct from their taxable net income the cost of preparing plans and specifications now.

Mr. Pirnie said that if private enterprise was not encouraged to carry its part of the postwar construction program it might be necessary to step the public-works program up from $5 billion to $15 billion, in which case it might be necessary to make an immediate appropriation of $5 billion to provide 40 percent grants-in-aid of all non-federal public-works projects.

The A.S.C.E., said Mr. Pirnie, went on record last year as in favor of federal loans to state and local agencies to finance their postwar planning. This, he stated should still be provided.



U. S. Signal Corps photo (Acme)

Unfinished submarine pen at Cherbourg

When American troops entered the waterfront area at Cherbourg they found this unfinished concrete shelter over a submarine pen. Built in among the warehouses of the old port that had been gutted by aerial attacks, its massive form would have been difficult to detect from the air. Worthy of note is the opening formed into the near corner, which appears to be a gun port to defend the submarine pen against land attack.

Federal aid airports recommended by U.S. Chamber of Commerce vote

Member referendum just completed strongly favors air service operation by railroads and a plan for coordinating all our systems of transport. Federal-aid system recommended.

The result of a membership referendum just announced by the U. S. Chamber of Commerce put that body on record as favoring construction of a nationwide system of publicly-owned airports, in general comparable to the present system of federal-aid to highways. There are 11 recommendations, all of which passed with more than the required two-thirds vote.

The main proposal deals with the establishment of a federal-aid system for financing construction of airports, federal funds to be matched 50-50 by state or local money. Use of federal funds would be restricted to grading, drainage, construction of runways, lighting and other safety features, with land, buildings, and maintenance provided by state or local government agencies.

Concerning apportionment of federal money, the recommendations do not prescribe any set rule, but rather say that apportionment should be "by an equitable formula taking account of the needs of the various states and localities from the viewpoint of a nationwide airport system, with due consideration to the provision already made of airports from defense and war expenditures."

"Administrative and financial responsibility for airport work," says one recommendation, "should be concentrated in a single agency in each jurisdiction—federal, state and local."

Airport planning surveys are recommended for each state, to be conducted in cooperation with the federal agency and with local airport authorities.

It is recommended that government-financed airports which would result in destructive competition with existing private airports serving the same areas and types of aviation service be not undertaken, and it is pointed out that privately owned and operated airports constitute one-half of the existing total. Though only a small fraction of the total expenditures, the chamber says, are for private airports, it comments that these "represent investments of great importance to future development of aviation."

The above propositions received an average of 1,825 votes in favor, and 118 votes against. A recommendation that a major part of the proposed construction program be reserved for periods of low business activity passed by a small majority, with a vote of 1,443 to 457.

These recommendations are in connection with the membership's approval of two policies on transportation, one to the effect that operators of one form of transportation service be permitted by law to operate other forms within reasonable territorial limits; the other providing that operators of different forms of transportation be encouraged to coordinate their services through contractual arrangement. Reports were prepared by the chamber's Transportation Committee which consists of representatives of air, rail, highway and water transportation, shippers, and other general business interests.

* * *

U. S. Sanitary Corps seeks sanitary engineers

The War Department has granted the Sanitary Corps authority to commission an additional 211 sanitary engineers in the grades of first and second lieutenants and captain. Qualifications are a degree from a recognized college or university in civil, sanitary, or chemical engineering, and; 2 years experience in sanitary engineering for second lieutenant; 4 years experience for first lieutenant; and 8 years experience for captain, (for applicants between 38 and 42 years of age).

Further information can be obtained by writing to the Officer Procurement Service Office, located in each Service Command Headquarters, or to the Officer Procurement Service, War Department, Munitions Building, Washington 25, D. C.

Committee is set up for right-of-way study

A new committee has been created i the Highway Research Board to b known as the Committee on Acquisitio and Legal Control of Right-of-way, A jacent Areas, and Parking Facilitie The functions of the committee includ the initiation and execution of origin research and the dissemination of i formation among the states, urban are and other local units of government, i the fields of highway right-of-way, a cess and roadside control, and parkin facilities. The legal, economic an policy aspects of these problems wi be investigated by this group.

David R. Levin of the Public Road Administration will be chairman of th committee.

MEETINGS

Regional and Local

NORTH CAROLINA LEAGUE OF MUNICIPALITIES, annual meeting, Robert E. Lee Hotel Winston-Salem, N. C., Aug. 23-25.

PENNSYLVANIA WATER WORKS OPERATORS ASSOCIATION, eastern Pennsylvania section Columbia, Pa., August 28-29.

NORTHERN MICHIGAN COUNTY ROAD COMMISSIONERS' ASSOCIATION, annual meeting Cadillac, Mich., Sept. 7-8.

NORTH DAKOTA WATER AND SEWAGE WORKS CONFERENCE, 16th annual convention, Cit Auditorium and World War Memorial Building, Bismarck, N. D., Sept. 12-13 jointly with the North Dakota League o Municipalities.

NEW ENGLAND SEWAGE WORKS ASSOCIATION fall meeting, Hotel Bancroft, Worcester Mass., Sept. 13.

AMERICAN WATER WORKS ASSOCIATION, WESTERN PENNSYLVANIA SECTION, AND WESTERN PENNSYLVANIA WATER WORKS OPERATORS ASSOCIATION, joint wartime conference, Roosevelt Hotel, Pittsburgh, Pa., Sept. 13-14.

SOUTH DAKOTA WATER AND SEWAGE WORKS CONFERENCE, annual meeting, Lincoln Hotel, Watertown, S. D., Sept. 19-20.

NEW ENGLAND WATER WORKS ASSOCIATION, annual meeting, Poland Spring House, Poland Spring, Maine, Sept. 19-22.

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Billion for airports recommended by CAA

The Civil Aeronautics Administration is completing a report to be submitted to Congress soon after the summer recess recommending a $1,000,000,000 airport construction program. The plan calls for 2,900 small runways, for private and local use, to cost $370,000,000, and 100 large, commercial-type airports, for use in airline operation, to cost $630,000,000—nearly twice the amount recommended for the greater number of small landing fields. The report is being based on a survey made at the request of Congress.

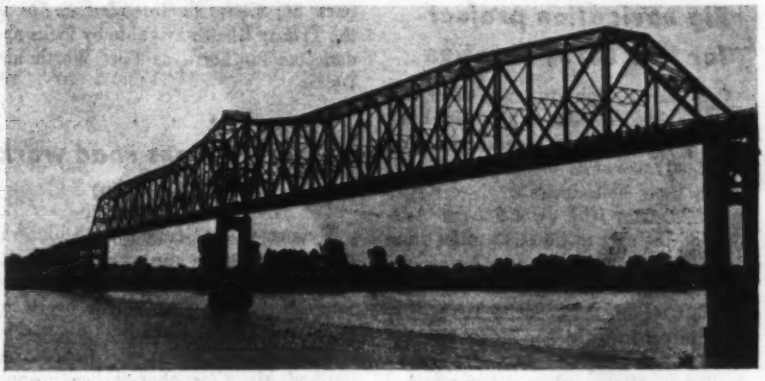
The small fields would include two groups—unpaved runways less than 2,500-3,500 ft. long, and 300 ft. wide, with at least two such per airport, and paved runways 2,500-3,000 ft. long. The commercial ports would all be paved, and are classed according to three lengths, those 3,500-4,500 ft., those 4,500-5,500 ft., and those 5,500 ft. or longer.

At all of the airports with paved runways, the runway strip would be 500 ft. wide, with a paved portion 100 ft. wide if the field is to be used for daytime operation only, and 150 ft. if also for night operation. Those for commercial use would have a paved strip 200 ft. wide if intended for landing on instrument flying.

The proposed program would nearly double the existing 3,086 airports, of which CAA proposes improvements for 1,625. Only 286 cities have been certified as airline stops, in comparison with the 1,827 which CAA deems necessary in an over-all airport system. Of the present 286 fields, 174 are scheduled for improvement. In addition to the 1,827 cities designated as needing airports, the report will show that 5,000 nearby communities also will be served by these.

The National Aeronautic Association is advocating a similar program, with additional provisions for 100 intermediate flight stop strips adjacent to highways, and for air harbors with facilities for fueling, servicing and storing float-type planes. The CAA objects to highway flight strips in the belief that, except for long stretches between cities in the west, land facilities should be near population centers, and because, also, it says single runways are undesirable in view of their necessitating cross-wind landings.

Some airport legislation has already been introduced in Congress. Rep. Jennings Randolph's (W. Va.) pending bill, H. R. 5024, provides $100,000,000 a year for ten years, for airport construction with CAA approval, and with states to pay half the total cost.



Wind wrecks Mississippi River bridge

The two 670-ft. continuous main spans of the Mississippi River bridge at Chester, Ill., about 70 miles south of St. Louis, fell into the river during a violent windstorm on July 29. Early reports over the radio and in the newspapers to the effect that the bridge was wrecked by lightning appear to be without foundation. No details of the storm are yet available, but the designers state that the wind would have had to have attained a velocity of 135 mph. to overturn the trusses.

Construction of the bridge was begun in 1940 and it was put into service late in 1942 (ENR March 19, 1942, p. 446). Over the main river channel is a 1,340-ft. continuous through truss of two equal spans. These trusses were 28½ ft. c. to c. and 100 ft. deep over the mid-river pier. Flanking the central trusses on both sides of the river is a 500-ft. deck truss over the side channel and a series of 60-ft. approach spans. The bridge carried a 22-ft. roadway and two sidewalks.

An underclearance of 107 ft. is provided at low water. The mid-river pier and the main pier on the Missouri side were sunk to rock by pneumatic methods at depths of 100 ft. and 110 ft., respectively, below water.

The main river channel is blocked but the U. S. Coast Guard is directing barge traffic through the narrow channel under the approach span on the Illinois side of the river, according to Col. L. B. Feagin, district engineer, U. S. Army, at St. Louis.

Because of the swift current, downstream traffic is limited to daytime operation of one barge at a time. Two barges at a time are moved upstream, both day and night.

The bridge belongs to the Chester Toll Bridge Commission. It was designed by Sverdrup & Parcel of St. Louis, and was built by the Massman Construction Co., Kansas City.

Removal of the trusses is primarily the concern of the bridge commission, according to Col. Feagin, but if necessary the Army Engineers will remove them to clear the navigable channel.

Press Assn. photo

Big navigation project for two Texas counties

On July 8, Liberty and Chambers counties, Texas, voted a $100,000 bond issue to provide the organizational fund for a 441,024-acre navigation district within their boundaries.

The district will extend from Anahuac on the east to Cove, 18 miles from Goose Creek, on the west and from the Liberty-Polk County line on the north to Smith's Point adjacent to Texas City and Bolivar in Galveston County on the south. It will include land drained by the Trinity River and its tributaries and Trinity Bay.

The $25,000,000 project will include the impounding of the Trinity flood waters by an 8½ mi. dike across Trinity Bay, which will create a fresh water lake of 96 sq. mi. The dike would be of the earth-filled type, 35 ft. high and 2,000 ft. wide at its base and 30 ft. wide on top.

The project also will include a canal for disposal of industrial water, a terminal railroad connecting Anahuac, Liberty, Romayor and Smiths Point, and a deep-water shipping canal and dock facilities at Liberty and Anahuac. The canal will connect Smiths Point with the Houston Ship channel, and will be part of a system intended to make the Trinity River navigable by locks and dams as far north as Fort Worth and Dallas.

• • •

Georgia plans road work to cost $4,000,000

Ryburn Clay, Georgia state highway director, recently announced plans for the expenditure of about $4,000,000 for construction and repair work on highways in that state.

The War Production Board has notified Mr. Clay that it has granted priorities for $3,150,000 worth of construction. On most of the projects the federal government will share costs equally with the state.

In addition, Mr. Clay announced that he will soon let contracts for $1,000,000 in road maintenance work to be paid for out of state funds. Plans for all this work are already approved.

In addition to repair work and bridge building, some of the projects call for the construction of new roads in mountainous section of north Georgia. When these are completed, Mr. Clay said that Georgia will have an all-paved east-west highway from the Alabama line into the Carolinas.

Mexican crops saved by All-American water

Thousands of acres of drought-famished crops in Mexico are receiving water from California's All-American canal following pleas by Imperial Irrigation District officials in Southern California to Secretary of State Cordell Hull and Secretary of the Interior Harold L. Ickes.

Requests for water came when farmers over the Mexican border faced immediate loss of a 16,000-acre cotton and corn crop, and produce from nearly 80,000 acres was jeopardized for lack of water.

While officials met to work out compensation details, water was being delivered to the area from the All-American canal through the Alamo irrigation canal.

• • •

Eight new wells have been completed at New Bern, N. C., to provide an additional 3,000,000 gal. of water a day. The wells, between the Neuse and Trent rivers, are expected to provide the city with water with less salt content and will augment the water supply from old wells near the Neuse River.

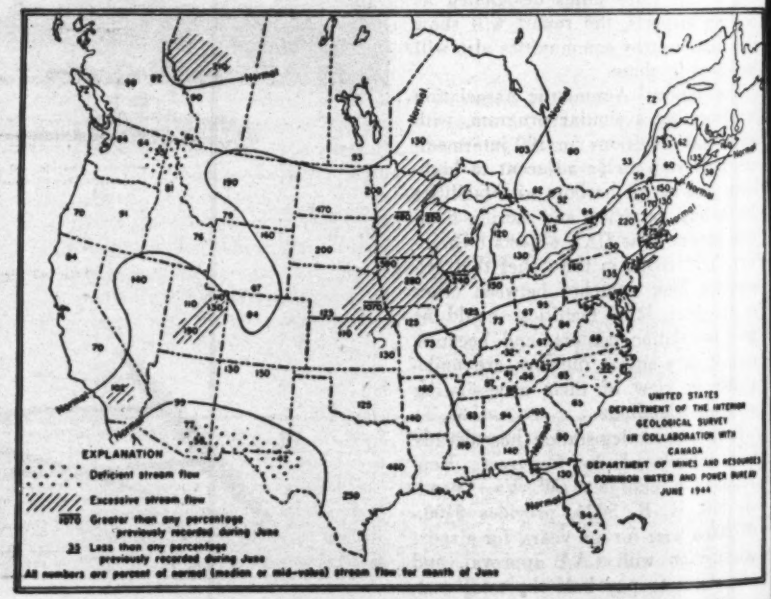
Both floods and droughts marked the month of June

In June floods of destructive magnitude occurred for the third consecutive month in the west-central states. Floods of local extent occurred also in New England, Alberta, and Utah. Drought prevailed in eastern Virginia and North Carolina. Noteworthy deficiencies in stream flow existed in southern Quebec, Ohio River Basin, upper Gila River Basin in Arizona, and in the Columbia River Basin.

Much of the West was favored with above-normal precipitation with general improvement in water supplies, except in the Columbia River Basin and Gila River Basin where conditions remained critical.

Ground-water storage in areas unaffected by heavy pumping decreased seasonally during the month in most parts of the country. However, at the end of the month the ground-water conditions were generally normal to favorable except in Florida, the eastern seaboard in North Carolina, Virginia, and Maryland, the Ohio Basin, Nevada, and parts of Oregon and Washington. Recharge continued in the central West, and some recharge occurred in the Northwest and in some areas in the New England States. However, except in the central West, Alabama and Mississippi, and parts of New England the ground-water conditions were generally not as favorable as a year ago. The most notable features of the month were the continued increase in storage in the central West and the improvement of conditions in some parts of the New England States and the Northwest.

In areas of heavy pumping in the West storage decreased generally during the month, owing to pumping for irrigation. However, at the end of the month storage was normal or above except in southeastern Arizona, where conditions remain critical, and in north-central California.


EXPLANATION
Deficient stream flow
Excessive stream flow
1976 Greater than any percentage previously recorded during June
33 Less than any percentage previously recorded during June
All numbers are percent of normal (median or mid-value) stream flow for month of June
UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY IN COLLABORATION WITH CANADA DEPARTMENT OF MINES AND RESOURCES DOMINION WATER AND POWER BUREAU JUNE 1944

Construction Communiques

Engineering news from the battlefronts

Far East—After two years in China and India supervising water supply for American soldiers, Lt. Col. Arthur B. Morrill, on leave as engineer of the Detroit, Mich., Sewage Plant, returned recently and told of the battle against deadly insects. Senior sanitary engineer of the United States Public Health Service, Colonel Morrill was a member of a group composed of doctors, entomologists and engineers attached to the United States Army in the Far East.

While the group worked principally on prevention of yellow fever, malaria and cholera, killing millions of disease-spreading insects, Col. Morrill taught Americans and Indians how to purify water.

"As we went deeper into India we found the malaria and water situations very bad," he said. "Army men had not been trained to combat the pests and diseases. Our first year's work greatly decreased the diseases."

Munda—Lacking the necessary piping to complete the plumbing of a newly-constructed 1,500-bed hospital on Munda, Seabees salvaged Japanese anti-aircraft shell cases and used them to install a 2,000-ft. brass drainage system, according to the Army-Navy Register.

Comdr. Horace R. Whitaker (CEC) USNR, officer-in-charge of the battalion, said that the idea was developed by Lt. William G. Nichol (CEC) USNR, and Lt. Walter S. Douglas (CEC) USNR.

Spotting the dump of expended shells, the officers recommended their use in place of the needed drainage pipe. Experimentally, a shell case system was installed in the operating room. The base of each shell casing was cut off, the resulting tubes telescoped and welded together. This proved so satisfactory that the idea was extended throughout the hospital.

Island "X"—More than 1,000,000 bd. ft. of lumber turned out in a few months, is the record set by the 73rd Battalion's sawmill on Island "X" somewhere in the Southwest Pacific. To make the job doubly difficult it was necessary to remove shrapnel from the logs before they could be cut to timber.

This job was achieved by utilizing an Army mine detector to spot the metal, then chopping it out of the wood with an axe. Credit for the idea which made possible the use of one saw blade for three months' continuous operation without repairs, goes to C. H. Merrell, CSF.

Money saved by the sawmill adds up to astronomical figures when it is estimated that it costs $200 per thousand board feet for lumber from the States. By using lumber cut on the scene for its work projects, the 73rd also saved valuable space on cargo ships for other vital war materiel.

Italy—A dispatch to the Chicago "Tribune" tells how an American Engineer unit engaged in one of the most perilous tasks in the 5th Army's advance—salvaging a bridge from the swift moving lower Garigliano River with makeshift diving outfits.

The Germans were making a desperate effort to halt the flow of big guns, ammunition and supplies across the stream, but convoys trundled steadily over the sturdy floating bridges.

Besides the engineers, who volunteered for diving work, others were bridge construction and wire laying crews which spread a smokescreen to limit the visibility of German gunners in the hills to the north.

The divers wore ordinary GI gas masks with a thin rubber hose through which the air was pumped to them from an air compressor on a rubber raft. They were clad in sweatshirts and regular field shoes and a strap of cartridge belts loaded with 20-pound weights to keep them down.

The divers went down one at a time for intervals of 15 to 20 minutes. They descended about 25 feet and stood in rocks and slime in the river bed.

Their chore was to help pry loose the wreckage of American-built bridges, which the Germans had shelled and bombed. This was done by a diver attaching ropes or hooks to the smashed installations, which could then be lifted by cranes out of the water.

Alaska—Col. Kenneth B. Bush of Bethesda, Md., former chief of staff of the Northwest Service Command, has been awarded the Legion of Merit for his part in planning base and highway installations on the Alaskan highway, the War Department announced recently.

The award was presented at the Pentagon Building by Brig. Gen. Robert H. Dunlop, acting adjutant general.

British Combine photo

Seabees worked day and night on Los Negros

The photograph reproduced above shows some of the work done by the 40th Construction Battalion of the Navy on Los Negros Island, for which battle honors were awarded to it by the War Department. (ENR July 27, p. 75). This is the spot where the Seabees "fought as they built and employed their few leisure hours off duty to attack the enemy." The action on which the award was based occurred during a precarious stage of the battle for the Admiralty Islands base.

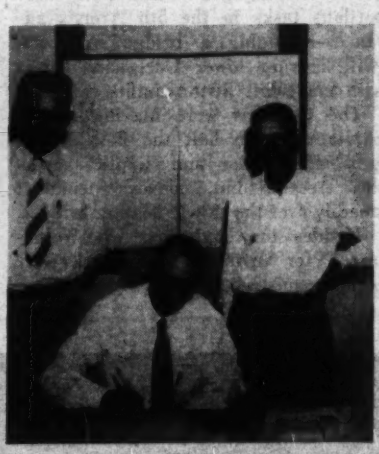
There were no day shifts or night shifts for the Construction Battalion during the critical hours of the Los Negros campaign. Under lights, they labored with their huge equipment, carrying immense amounts of earth and coral from one place to another, smoothing out some sections, leveling off others in the task of building runways and other installations.

MEN AT WORK

About to inspect the 3,356-mile Inter-American Highway from Laredo to Panama are (left to right) RALPH E. MILLS, constructor; E. W. JAMES, chief of the Inter-American Regional Office, P.R.A.; MAJ. GEN. PHILIP B. FLEMING, Administrator, Federal Works Agency; THOMAS H. MACDONALD, Commissioner, P.R.A.; and MARVIN L. HARSHBERGER, P.R.A. engineer in Costa Rica.

Inspecting one of the rapid sand filters in the recently completed water purification plant at Jackson, Miss. are (left to right) BERT F. STEVES, principal design engineer and T. D. SAMUEL, both of Black and Veatch, consulting engineers, Kansas City, Mo.; JAS. H. MARTIN, director of building, HARRY L. LOFLIN, park superintendent and BAXTER F. WADE, superintendent of waterworks.

A war project gets the attention of P. M. SNELL (left), chief of the operations division, Wilmington, N. C. district, U. S. Engineers; LT. COL. J. T. KNIGHT, JR. (center), district engineer, and MAJ. P. E. WERNER, executive officer.



Shortening the Overseas Highway by 17 miles required attention of these three engineers of the Florida Road Commission. Left to right: E. C. GLENNEY, construction superintendent; E. C. DeGARMO, assistant state highway engineer, and W. C. BLISS, project engineer.

At Boeing Field, Seattle, Wash., additional runway, parking and taxiway areas are being built by Army Engineers at a cost of $1,644,658. COL. CONRAD P. HARDY, Seattle District Engineer, directing the work; N. FIORITO, Seattle contractor; LT. COL. GEORGE SUGDEN, resident representative Army Air Forces Materiel Command; and MAJ. LEONARD BINDON, assistant chief, operations division, Seattle Engineer District.

Hard working engineers in the eternal battle to confine the Mississippi River within its network of levees, GEO. YINZANT in charge of revetment work, and LT. COL. C. P. LINDNER, executive assistant to the president of the Mississippi River Commission, inspect a recent emergency bank protection project near Vicksburg, Miss.

...truction of over a hundred shallow wells ...provide more water for Elizabeth City, ...C., resulted in much hard work on the part ...J. C. PARKER (seated), superintendent of ...city's public utilities commission, and C. ...McGEE, resident engineer on the work ...the Federal Works Agency.

U. S. Army photo

BRIG. GEN. WILLIAM H. ROSE, retired, receives the Exceptional Service Emblem from MAJ. GEN. T. M. ROBINS for service with the Corps of Engineers. General Rose was graduated from West Point in 1903, and served with the Engineers until 1919 when he resigned his commission with the permanent rank of brigadier general.

...atter planning and routine work keeps ...CHARD MESSER, director of the bureau ...f sanitary engineering of the Virginia State ...partment of Health, mighty busy these days.

For the Federal Works Agency at Norfolk, Va., BLAIR BOYLE (left) is project engineer; L. L. PEARSALL (center), principal engineer and H. E. CLARRY, construction engineer.

...charge for the Public Roads Administration on the huge Florida ...cess road program now nearly complete are: WM. N. RYERSON ...(left), highway engineer; R. B. SMITH (center), senior highway engi...neer; and GUY L. SMITH, highway engineer.

Training specialist troops to build airbases are, left to right: MAJ. ROBERT M. TARBOX, executive officer of the 1899th Engineer Aviation Battalion; MAJ. T. S. BORNUM, JR., engineer officer of engineer aviation units at McDill Field, Fla., and CAPT. J. A. BARROW.

MEN AND JOBS

Ray Reese, Corning, Ia., has been named acting county engineer of Adams County, Ia., in the absence of **Carlton H. Vernon,** who is now in the Navy.

Henry H. George, III, has succeeded Walter H. Taylor, III, as director of public works of Norfolk, Va. The change is because of the retirement of Mr. Taylor, who has been in the employ of the city 49 years. Mr. George has been assistant city engineer of Norfolk seven years. He received a degree in civil engineering at Cornell University in 1912.

Sidney D. Rogers, Jr., of Wilmington, N. C., a graduate of the North Carolina State College School of Engineering, has been promoted to the rank of captain with the Army in the Pacific where he has been serving for the past two and one half years.

Erskine P. Garrison, of Raleigh, N. C., who prior to entering the service in December, 1942, was connected with the U. S. District Engineers Office at Wilmington, N. C., has been assigned to the Coast Artillery School at Fort Monroe, Va., where he has the rank of sergeant.

Col. Louis J. Rumaggi, of the Army Corps of Engineers, who has been commanding officer of the Engineer Unit Training Center at Camp Sutton, N. C., recently took over as commanding officer to succeed Col. Walter R. Wheeler, retired.

Born in Memphis, Tenn., Col. Rumaggi received his appointment to the U. S. Military Academy from Ohio, and was commissioned in the Corps of Engineers in 1922. He has seen service in Hawaii, at Fort Belvoir, Va., and as district engineer at Galveston, Tex. He also has done considerable topographical work on the east coast and spent four years at Dayton, Ohio, helping perfect aerial photographic and map making equipment.

In 1940 he was placed in charge of the organization of the 382nd Engineer Regiment at Camp Claiborne, La., and later became executive officer of the Engineer Unit Training Center there.

Samuel Judd, who has been with the U. S. Bureau of Reclamation for the past 18 years, has received the award of excellence from the Department of the Interior. Grand Coulee power plant needed two turbines. If some already made could be obtained it would save two years delay in manufacture. Judd located two turbines at the Shasta power plant in California. These, the only ones available, were built for counter-clockwise operation and the inlet pipes at Grand Coulee had been constructed for clockwise turbines.

Judd worked out a plan for changing the course of the inlets to make the water hit the turbines from the right side. As a result Grand Coulee has produced over 2 billion kwh of electricity more than would have been possible without the two additional turbines.

W. D. Faucette, chief engineer of the Seaboard Railway, Norfolk, Va., since 1931, has been promoted to executive representative. He will be succeeded by **W. D. Simpson,** former assistant-chief engineer for maintenance of way. Mr. Simpson has been with the company since 1916.

Roger Bates, Bay Area engineer, has been re-appointed city engineer of Concord, Contra Costa County, Calif.

Anton E. Tedesko, for the past two years engineering manager for the Washington office of Roberts & Schaefer Co., consulting engineers, has returned to the company's main office at Chicago. Roberts & Schaefer has closed its Washington office, leaving Philadelphia as the sole eastern branch of the firm.

I. T. Douglas, Rosetown, Sask., has been named Minister of Highways and Public Works, and **J. H. Sturdy,** Saskatoon, Sask., Minister of Rehabilitation and Reconstruction in the provincial government of Saskatchewan.

Seabee Harold Koopman, now serving abroad, has recently been promoted to the rank of lieutenant commander. Project engineer for the Kent County road commission, Grand Rapids, Mich., for 19 years and before that with the state highway department, Lt. Comdr. Koopman is now doing important work with a naval construction battalion.

Capt. Thomas J. Coffey has been appointed superintendent of public works in Albion, N. Y.

Lloyd Y. White has been appointed Pacific Coast representative for Morris and Van Wormer, New York City management and consulting engineers. White, who has established offices in the Rialto Building, is well known in the Bay area, having been district manager for H. H. Robertson Co. from 1929 to 1939.

Paul Christy, Zanesville, is succeeding Edgar L. Mill, Mt. Vernon, as resident engineer, Division five, Ohio State Highway Department, with headquarters in Newark. Christy for the past four years has been assistant planning engineer for divisions three and five.

Lt. Col. N. W. Haner, who recently returned from an overseas assignment and has been stationed at Providence, R. I., has arrived at the Wilmington, N. C., District Engineers Office for duty as acting district engineer pending the assignment of a permanent engineer.

Arthur E. K. Bunnell, civil engineer of Toronto and partner in the consulting firm of Wilson and Bunnell, has been appointed consultant on community planning for the Ontario Department of Planning and Development. In recent war years he has been director of utilities in Toronto, acting under the service administrator of Canada's War-time Prices and Trade Board. He is now technical director for the Toronto City planning board and will combine these duties with his new work for the Ontario government.

Clarence Rawhouser, Denver engineer with the U. S. Bureau of Reclamation, has received the award of excellence from the Department of the Interior. He worked out a method of eliminating concrete construction joints which is said to have saved over $200,000 in the building of the Friant Dam in California. His idea is now being applied at the Fontana Dam by the Tennessee Valley Authority.

George W. Naill, construction engineer, has been made manager of the Ebasco International Corp., a subsidiary of the American and Foreign Power Co., at Sao Paulo, Brazil. Naill has completed five years work on the Alcoa Dam, near Knoxville, Tenn.

City Engineer Ivor Strong of Swift Current, Sask., has resigned to become assistant city engineer of Calgary, Alta.

E. J. Wheeler, Muscatine, Ia., with the Muscatine County engineer's office since 1929, has been named county engineer to succeed the late F. P. G. Halbfass.

Water pollution still a problem

Some of the latest developments and discussions on the subject of water pollution in various parts of the country are as follows:

Mississippi River—Demand that the State Board of Health do something about reducing pollution of the Mississippi River by ordering state institutions to cease dumping their sewage into the river was made at a recent meeting of the board of trustees of the Minneapolis-St. Paul Sanitary District.

Carl Swanson, state director of public institutions, said sewage from St. Cloud reformatory and Anoka state hospital receives primary treatment before being dumped into the river.

T. W. Riedesel, public health engineer in the division of sanitation, said many communities were planning to build sewage disposal plants after the war and that this might solve the problem since state institutions could connect with these systems.

Pennsylvania — An anti-pollution hearing was held at the state capitol in Harrisburg recently. A. H. Stewart, state secretary of health, and chairman of the State Sanitary Water Board, outlined plans of the agency to clean up the commonwealth's waterways and urged cooperation of industries and municipalities.

"The time has now come," said Dr. Stewart, "when municipal officials and our citizens must recognize that the removal of pollution from their waste waters is a utility service, which must be provided and paid for.

"Likewise, industry must recognize that the cost of disposing of the waste products of industry is as much a part of the manufacturing cost as is the payment for raw materials and labor."

Dr. Stewart said failure of those responsible for stream pollution to treat their wastes properly is causing increased agitation for federal action to control stream pollution. He added, "We now have sufficient law for this purpose and the board intends to apply it."

Philadelphia—James H. Allen, secretary and engineer of the Interstate Commission on the Delaware River Basin, declares that a start should be made in 1945 on a $25,000,000 program to clean up the Schuylkill River. The commission represents Pennsylvania, New York, New Jersey and Delaware.

The problem, Mr. Allen said, required cooperative action by the commonwealth, anthracite operators and the federal government, but was primarily one for Pennsylvania, since the Schuylkill lies wholly within the the state.

Mahoning Valley—The Mahoning Valley Industrial Council's water resources committee has urged Youngstown, Ohio, and neighboring communities to act immediately to set up a complete system of sewers and a sewage treatment works to clean up the Mahoning River in preparation for building the Beaver-Mahoning waterway.

The appeal followed a series of meetings of the committee, composed chiefly of local industrial engineers with state, district and federal engineers.

The engineers proposed construction of a reservoir for the storage of flood waters.

Baltimore, Md.—Extensions to the Back River sewage disposal plant costing $1,000,000 are to be rushed as soon as priorities can be obtained.

Details of Baltimore's proposed improvement program were released by Dr. R. H. Riley, head of the State Department of Health, who has been investigating water pollution. Nathan L. Smith, chief engineer, said funds would be obtained from the $2,300,000 unspent out of the last $5,000,000 sewer loan approved by city voters.

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Naval training base nearing completion

Construction of the Navy's $1,500,000 amphibious training base at Morro Bay in San Luis Obispo County, Calif., is nearing completion, Twelfth Naval District headquarters in San Francisco announced recently.

Already completed is a 200-ft. loading dock and a 500-ft. metal pontoon dock for landing craft used in training. A causeway running to a neck of land jutting into the bay, providing a protected beach for troops when the seaward side is too rough for landing craft, has also been constructed, the Navy revealed.

A 250-ft. T-shaped pier with a full-length frame barrier used to simulate the side of a ship for disembarking amphibious troops and a 200x300-ft. concrete shoulder adjacent to the new loading dock are nearing completion.

Largest expenditure will be made for the dredging of Morro Bay and extending the present breakwater structure. About $1,000,000 is being held in reserve for this project, initiated by the Navy but which will be completed by the U. S. Army Engineers.

BRIEF NEWS

Improvements to Boeing Field, Seattle, Wash., involving extension of a runway, increasing of parking and taxiway areas, and removal of a number of barracks, bomb shelters and revetments at a contract cost of $1,644,658, were begun July 4. N. Fiorito Co., Seattle, has the contract from the Seattle Engineer District, Col. Conrad P. Hardy, District Engineer.

Now that the Mexican government has purchased the Interoceanic Railway, an old British-owned narrow gage line it had operated for some time between Mexico City and the port of Vera Cruz, plans are being developed to convert the railroad to standard-gage for better service and more economic operation. Engineers of the National Railways, custodian of the Interoceanic Railway for the Mexican government, have charge of these plans.

Recently, Texas Attorney General Sellers ruled that a county cannot spend funds on highways that belong to the state. The question arose over the maintenance of a street in Houston that is part of a state highway. The attorney general ruled that it would not be legal to spend county funds on any designated state highway because such highways are not under the jurisdiction of the county commissioner's court or the county commissioner.

Plans of the Aeronautical Institute of Canada for development of 400 airports and landing stations cover the Dominion of Canada at a cost of $20,000,000, have been completed, according to the Secretary of the institute.

The City Commission of Galveston, Tex., has ordered plans and estimates to be made for another 30-in. water main from the Alta Loma artesian wells to Galveston, as the city is faced with a probable acute water shortage on account of increased population and heavy industrial, Army and Navy demands. This condition is aggravated by leaking water mains from which 300,000 gals. of water are lost daily.

Householders are being asked to conserve water voluntarily until the situation can be relieved, and pressure at the Alta Loma pumping station is being cut down to 45 pounds at certain intervals. The new 30-inch main will cost over $1,000,000, Mayor George W. Fraser estimated. This probably would be financed by a bond issue.

...ivers and Harbors Congress favors

building industry to move to interior

News of the engineering schools

Earle L. Waterman has been appointed head of the department of civil engineering at the University of Iowa to succeed B. J. Lambert, retired. Prof. Waterman has been at the University of Iowa since 1919, first as associate professor of public health of the Extension Division then as associate professor of sanitary engineering and, since 1925, as professor of sanitary engineering.

A civil engineering graduate of the University of Vermont, class of 1907, Prof. Waterman was assistant, then associate professor of hydraulic and sanitary engineering at Pennsylvania State College until 1919. In 1918-19 he served for a time as a sanitary engineer in the Army with rank of captain. He was state sanitary engineer of Vermont, working through the summers in that state for several years.

In a recent survey, the Timber Engineering Co. asked 333 university professors, who had requested 40,000 pieces of technical timber literature from the company last year, whether they were teaching courses in timber design and if they planned to continue them after the war. Of the 224 who replied, there were 188 in 135 universities who were using such literature in class instruction and 144 said that they expect to continue their courses after the war. In 1936, when this educational work was started, there were only 31 professors in 23 universities who were interested in making use of the literature, according to the company.

On July 7, Col. Blake R. Van Leer, former dean of engineering at N. C. State College, was installed as president of the Georgia School of Technology, succeeding M. L. Brittain, who has retired with the title of president emeritus. Colonel Van Leer was graduated from Purdue in 1915 and once attended the University of Caen, France. He was retired from the Army in order that he might accept the presidency of Georgia Tech. His full record appeared in *ENR* May 25, p. 777.

Evansville College, Evansville, Ind., is to have a new engineering and science hall, one of three new buildings to be constructed when materials are again available.

John A. Needy, dean of the college of engineering of Ohio Northern university, Ada, O., will join the staff of Evansville College on Sept. 1 as director of technological and engineering education, President Lincoln B. Hale has announced.

Dean Needy's first task in Evansville, will be to conduct, in cooperation with the public schools, a survey to determine the need for technical and engineering education here. On the basis of this survey, the college will build its program of technical education. Dean Needy will also serve on the committee which will pass upon plans for the new engineering and science building.

Wesley J. Hennessy, supervisor of the training program for engineering aides at the Grumman Aircraft Engineering Corp., has been appointed assistant to the dean of engineering at Columbia University. He succeeds A. Dexter Hinckley.

Mr. Hennessy will work in close cooperation with the admissions office, the faculty advisors, and the appointments office handling problems of graduate placement and student employment, according to Prof. James Kip Finch, acting dean of the School of Engineering.

"Columbia is now considering compulsory summer employment in postwar years for all engineering students," Prof. Finch also announced. "The university is convinced that industry will recognize its responsibility in the education of engineers and its opportunity through the summer employment of engineering students to attract and select outstanding students for its technical and engineering personnel.

"Industry and our technical schools have a joint responsibility in the education of the engineering personnel required to maintain American leadership in this engineering age."

Progress is reported on Houston water plans

Preliminary work in preparing detailed plans for the $5,000,000 dam and reservoir on the San Jacinto River for Houston, Tex., has been done. Surveying for the dam foundations is nearly finished and it is expected that complete plans for the dam and reservoir will be ready by January 1, W. W. Horner, of St. Louis, consulting engineer for Houston's water improvement program, and G. L. Fugate, designing engineer for the dam and reservoir, told the Houston City Council on July 12.

The reservoir will be on a 16,000-ac. site. It will be about 15 mi. long and 6,500 ft. wide, built to hold 50,000,000,000 gal. of water.

Earth will be used to construct the dam and it will have a wide concrete overflow. It will be built to pass a flood two and one half times the maximum flood of record.

The filter plant is scheduled to cost $2,500,000. A model unit costing $20,000 to $25,000 will first be built to check the details of the filter design. After this is done, the first unit of the permanent filter plant will be built at a cost of $600,000 to $800,000.

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Mexican commission here to buy road machinery

The Mexican government has established a commission in Washington, D. C., to purchase all kinds of machinery to be resold to Mexico. Much of the materials will be for highway construction and building. The commission will be headed by Felix Villasenor, and the fund will total $4,000,000 to begin. The commission will sell all machinery purchased at cost, plus 10 percent, which will cover transportation and duties.

Yosemite entrance roads will be improved

Preliminary studies of the realignment of the Big Oak Flat road, northern entrance to Yosemite National Park were begun recently by the California State Highway Commission.

The realignment would be for a distance of about five miles, extending from a switchback on Priest's grade to the park line. The road is the only source of entry into the Hetch Hetchy project owned outright by the city of San Francisco, it was explained by H. E. Lloyd of the San Francisco Public Utilities Commission.

Mr. Lloyd also explained that San Francisco's plans for the projected $20,000,000 Cherry River project in the Yosemite area would be materially advanced by the improvement. He said San Francisco plans to construct roads which will connect with the Big Oak Flat road near Buck Hollow.

Rivers and Harbors Congress favors expansion of inland-waterways

Congress asked to have the Corps of Engineers plan an interconnected system of inland waterways for the United States

Preparation of plans for an interconnected system of inland waterways and reorganization of the Interstate Commerce Commission to give representatives of water transportation more voice in its activities was asked of the Congress of the United States by the National Rivers and Harbors Congress at a two-day session held in New Orleans July 27-28. The National Rivers and Harbors Congress is made up of representatives of organizations interested in water transportation and includes in its membership many members of the U. S. Congress.

Interconnected Waterways

The U. S. Congress was asked to enact legislation "empowering and directing the Secretary of War, acting through the Chief of Engineers, to prepare and submit to Congress a plan for the development of an interconnected system of inland waterways within the United States of such geographical extent and economic significance as to be truly national in character, and limited only by absolutely insurmountable physical or economic barriers." Such legislation, according to the report approved at the sessions, should provide that reports made by the Chief of Engineers on the examination of every project, made in accordance with existing provisions of law, shall include the results of examinations of all strategic values of such projects in time of war. The strategic value should be given weight in determining the economic justification for the project.

Present system approved

Complete adherence to and support of present procedures under which waterway projects are handled by the Corps of Engineers and by Congressional action was reaffirmed at the meeting. Speakers pointed to an enlarged opportunity for the Corps to afford peace-time training for army engineers in works of magnitude as a means of training for war-time tasks. Maj. Gen. Max Tyler, president of the Mississippi River Commission, emphasized to the waterway advocates the necessity of rigidly examining each proposed project. Projects that cannot prove their case with sound facts and figures, including borderline cases, should not be approved, he said.

The war-time role of inland waterway transportation was described by Maj. Gen. Eugene Reybold, Chief of Engineers, who declared that "the actual experience during peace-time of supervising large construction projects has made the civil functions of the Corps of Engineers well nigh indispensable in preparing engineer officers for the emergencies of war." General Reybold gave credit to this experience for the adoption by the American army of heavy construction equipment as standard equipment for troops. Our army, he said, was the first to do this and the value was demonstrated in the great construction job that has been done.

Inland waterways, said General Reybold, made it possible for the shipbuilding industry to move to interior points during the war, where materials and manpower were available. This, he added, was of very material help in prosecuting the war.

On the controversial issue growing out of conflicting plans for the complete development of the Missouri River basin, prepared by the Army Engineers and by the U. S. Bureau of Reclamation, the Congress went on record as opposed to any legislation that would conflict with the use of the river for navigation.

Reorganization of the I.C.C.

The U. S. Congress was asked to reorganize the Interstate Commerce Commission to set up a five-man commission with one commissioner named to represent each of the following: railway transport, inland waterway transport, air transport, highway transport, and domestic ocean transport.

The project committee put in a report covering numerous projects now before Congress with recommendations concerning each.

JOBS OF THE WEEK

CYCLING PLANT, Columbus, Tex.

Petroleum Engineering Co., Houston, has been awarded a contract for the design and construction of 100,000,000 cu. ft. daily capacity cycling plant by Shell Oil Co., Inc., Houston. The estimated cost is $1,750,000.

STOREHOUSES AND FACILITIES, Spokane, Wash.

Bureau of Yards & Docks, Navy Dept., Washington, D. C., has awarded a contract for general storehouses and facilities, to Western Construction Co., Seattle, Wash., at $1,723,000.

AIRPORT, Decatur, Ill.

M. J. Boyle & Co., Chicago, Ill., has been awarded a contract for constructing airport, 3 runways, each 150 x 5,300 ft., grading, storm sewers, fencing by Civil Aeronautics Administration, Chicago, Ill., at $1,307,299.

AIRPORT, Springfield, O.

Lewis & Frisinger, Julius Porath and E. B. Schwaderer, Ann Arbor, Mich., were the lowest bidders for clearing, grubbing, grading, underdrains, at airport at $1,213,810.

AIRPORT FILL, Idlewild, N. Y.

Atlantic Gulf & Pacific Co., New York, N. Y., will construct 8,500,000 cu. ft. fill at Idlewild Airport, Contract 5 to cost $1,341,950. Department Marine & Aviation, New York, N. Y., awarded the contract.

EARTHWORK, Louisiana

H. B. Blanks Co., New Orleans, has been awarded a contract by U. S. Engineers, New Orleans, for 2,220,000 cu. yd. earthwork, Lower Tensas Levee at 17.06c per cu. yd.; and 2,410,000 cu. yd. Vidalia Point Levee, at 13.25c per cu. yd. Both projects are in the New Orleans District.

HOSPITAL, Toronto, Ont.

Dept. Public Works, Ottawa, received the lowest bid from Redfern Construction Co., Ltd., Toronto, Ont., for hospital at Sunnybrook Farm, North York. C. D. Sutherland, is the architect. The estimated cost is $3,000,000.

Note—Additional bidding and contract news on many projects large and small appear in the Construction News section beginning on page 13.

OBITUARY

Walter Scott Faddis, 82, former president of the Cauldwell-Wingate Co. building contractors, New York, and of the Building Trades Employers Association of that city, died there on July 26. Mr. Faddis had been in the building trade for more than 60 years. After considerable experience in the west, in 1910 he helped organize the Cauldwell-Wingate Co. He had been its president for some years when he retired in 1940. For 18 years he was president of the Building Trades Employers Association.

Richard H. Royce, 55, commissioner of public works in Rutland, Vt., died July 25. As an engineer he was manager on construction of the large pipeline from Chittenden Dam in Vermont to the power house at East Pittsford.

Joseph P. Cartier, 70, a civil engineer for many years with the Southern Engineering Co., died July 18 at Charlotte, N. C.

George R. Taylor, 72, died July 16 in Springfield, Ill., where he had his own contracting firm up to three weeks before his death. His specialty was building grain elevators and processing plants.

Frederick J. Corl, 74, for many years professor of mechanical drawing at du Pont Manual Training High School, Louisville, Ky., who had taught mechanical drawing to many engineers and architects since 1892, died July 18. He retired in 1942, on completion of 50 years with the school.

Charles Henry Reaneh, 94, waterworks engineer of Oak Cliff, Dallas, Tex., from 1901 to 1928, died July 15.

William Theodore Bailey, 43, chief engineer and superintendent of the water department of Kansas City, Mo., died July 18. At one time he was chairman of the Missouri Valley Section of the American Water Works Association, for his outstanding work and achievements he received the George W. Fuller award from the association.

L. R. MacKenzie, 61, civil engineer of Des Moines, Ia., died recently. He was first employed by the Portland Cement Association, following which he became consulting engineer of the former Southern Surety Co. Then he organized the American Vibrolithic Corp., of which he was president and general manager. In 1931 Mr. MacKenzie organized L. R. MacKenzie Inc., which he headed at the time of his death.

Joseph J. Walker, 72, mayor of Dobbs Ferry, N. Y., since 1933 and a civil engineer with the American Bridge Co. until his retirement five years ago, died July 26.

Albert L. Cerveny, 45, associate engineer in the bridge division of the Colorado State Highway Department died in Denver, July 25, Mr. Cerveny was graduated from the University of Colorado, and had been with the highway department since 1930. He was an expert bridge designer.

A. H. Dunlap, 69, for the past 22 years a member of the State Board of Water Engineers of Texas died July 22. Formerly he had been engaged in irrigation work and railroad location in west Texas.

Thomas Edward Moodie, 44, of Boston, Mass., formerly professor of aeronautical engineering at Georgia Institute of Technology, died July 21. Mr. Moodie, a native of Texas, took his B.S. degree at Massachusetts Institute of Technology and his master's degree at Georgia Tech. He taught there from 1927 until 1936. At the time of his death he was executive vice president of Aviation Engineers, Inc.

Henry E. Elrod, 65, Houston, Tex., consulting engineer and utilities expert, died July 18.

Mr. Elrod in 1901 was graduated from Texas Agricultural and Mechanical College. He designed and superintended the building of the city water works system of Tyler, Tex., and Santa Monica, Calif. He saved Santa Monica from having to be annexed to Los Angeles to obtain water by discovering an inexhaustible underground water supply and designing and having drilled deep water wells to tap this supply. At Santa Monica he also designed two reservoirs above ground which are thought to be the first ever built in independent sections to withstand earthquake shocks.

He also designed the city water filtration plant at Brownsville, Texas, and the sewage disposal plant of Golden Gate Park, San Francisco, and other cities.

His processes for sewage disposal are used by various cities as are the mechanical and electro-mechanical devices he invented for the treatment of sewage and purification of water.

Theodore A. Leisen dies, past A.W.W.A. president

A long and honorable career in engineering closed with the death of Theodore Alfred Leisen, 80, in Detroit, Mich., on July 18. After early experience in Philadelphia, in 1883 Mr. Leisen became assistant engineer in the engineering and surveying department of Wilmington, Del.

From July, 1883, to November, 1885, he was assistant engineer on the Ferro Carril de Antoquia, Republic of Colombia. He had charge of location and construction while 15 miles of that railroad was being built through very rough country. About ten bridges and some large culverts were put in.

Later Leisen had full charge of the construction of the extension of Ferro Carril de Bolivar and he remained as engineer of maintenance of way.

From July, 1890, for several years he served the city of Wilmington, Del., in engineering capacities. He was chief engineer and superintendent of the water department. Later he held a similar position at Louisville, Ky. In 1919 he was commissioned major Q.M.C. and had charge of constructing Camp Custer, Mich. From 1923 to 1939 he was general manager of the Metropolitan Utilities district of Omaha, Neb.

Mr. Leisen was a past president of the American Water Works Association.

WEEKLY CONSTRUCTION SUMMARY

CONTRACTS

Continental U. S. Only (Thousands of Dollars)

	Week Ending Aug. 5 1943	July 27 1944	Aug. 3 1944
Federal	$38,049	$20,322	$15,281
State & Municipal	3,110	5,191	7,673
Total public	$41,159	$25,513	$22,954
Total private	6,330	15,553	8,864
TOTAL	$47,489	$41,066	$31,818
Cumulative 1944 (31 weeks)			$1,082,209
Cumulative 1943 (31 weeks)			$2,110,029

Note: Medium size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	1943 31 Weeks	Cumulative 1944 31 Weeks
NON-FEDERAL	$267,747	$295,880
Corp. Securities	15,321	85,845
tate & Mun.	92,293	70,575
RFC Loans	9,000	56,460
FPHA Loans	3,133	.....
REA Loans	20,000	20,000
Fed.-Aid Hwy.	128,000	63,000
FEDERAL	$2,653,838	$1,263,800
TOTAL CAPITAL	$2,921,585	$1,559,680

ENR INDEX NUMBERS

Index base=100		1913	1926
Construction Cost	July '44	299.94	144.19
Building Cost	July '44	235.55	127.33
Volume	June '44	91.	40.

CONSTRUCTION REPORTS

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ELSIE EAVES, Manager *SCOTT McLEOD, Statistics* *J. A. MAHONEY, Reports*

(Daily service also available—Write for details)

WATER SUPPLY

ROPOSED WORK

Ark., Siloam Springs — P. P. Hamilton, ayor, WW imprvs. $210,000. Applied to WA. H. T. Lawrence, 1502 NW 21 St., klahoma City, Okla., engr.

Tenn., Murfreesboro—City, Sam Cox, mgr., ds soon 8 in. water line from city limits site proposed shoe factory. $72,000. artin S. Roberts, 3rd Natl. Bank Bldg., ashville, engr.

Tex., Houston—Filtration plant. $25,000 ppropriated. G. L. Fugate, city engr.

Tex., Longview—City, c/o Mayor, WW imrvs. incl. booster pump. sta., elevated stor- e tank, imprv. filter plant and distr. lant. $300,000. Will apply to FWA. Freese Nichols, Cappe Bldg., Fort Worth, engrs.

Wis., Lake (P. O. Milwaukee)—Town, 4001 . 1 St., Milwaukee, rejected bids June 30, eep well. Mead, Ward & Hunt, 550 State ., Madison, engrs. CD 7/11—ENR 7/14, nder LB.

Wyo., Hanna—Union Pacific R.R., B. H. rater, ch. engr., 1416 Dodge St., Omaha 2, eb., water treatment plant for locomotive ater sys. $70,610.

Que., Sillery—Municipality c/o C. Langlois, lk., 1 Macguire Ave., increasing capacity iltration plant from 500,000 to 1 mgd. M. ilbert, 5 Bois Joli St., Quebec City, engr.

IDS ASKED

Bids Asked August 8

Ia., Knoxville—Bd. Water Trustees, K. anderbilt, chn., 1½ m.g. concrete storage eservoir. Stanley Eng. Co., Muscatine, engr.

Bids Asked August 9

Ont., Toronto—R. Harrison, secy. Twp of earboro Pub. Utilities Comn., 1666 Kingston Rd., Zone 13, exten. filtration plant, mgd filter capacity exten., 12x45x60 ft. on.-con. coagulation basin, filter plant ldg., etc. $65,000. James, Proctor & Redern, Excelsior Life Bldg., Toronto, engrs.

Bids Asked August 10

Ala., Glencoe—City, c/o Mayor, 75,000 al. elevated water tank, pump house, eters, hydrants, etc. J. W. Goodwin, Marin Bldg., Birmingham, engrs.

N. Y., Newtonville—Town Bd. of Colonie, own Hall, Newtonville, 2 new wells, pump. ta. and 8 mi. 8 in. supply mains, Latham. lles & Holroyd, 257 Bway., Troy, engrs.

Pa., Ambridge—Boro, P. J. Gaul, burgess, ater supply sys. imprv., 8- to 12-in. single ase wells with high copper screen. $20,000. . L. Nadeau, Boro Bldg., boro engr. hester Engineers, 210 E. Parkway, NS, Pittsburgh, Zone 12, engrs.

Bids Asked August 15

Calif., Napa—City Clerk, City Hall, gravity ection concrete dam, 50 ft high, increasing apacity Eastside Reservoir. Plans deposit 10. A. Kempkey, Balboa Bldg., San Franisco, consult. engr. CD 5/31—ENR 6/8.

Bids Asked August 16

Tex., Houston—City, sub-station unit and acilities (for network of water supply ells), over $25,000; furnishing, installing motor driven deep well pumping units, ver $25,000. G. L. Fugate, City Hall, engr.

Tex., Houston—City, c/o M. H. Westerman, secy., City Hall, furnishing underground electric cable for transmitting power nd pumping water wells, 2,400 volt metalad switch-gear, part of power control quip. for electric pumps; unit sub-station. . Dannenbaum, dir. Utilities Dpt., City Hall.

OW BIDDERS

†Tex., Houston—Federal Works Agency, 02 Electric Bldg., Fort Worth, July 25, ater distr. sys., Tex. 41-884-F, Contr. 4, rom Gayle Bros., 308 Blodgett St., $101,034. st. $100,000. CD 7/11—ENR 7/13.

†Va., Newport News—Newport News aterworks Comn., City Hall, July 21, ddnl. water distr. lines, incl. installing pprox. 13,400 ft. 6-to 16-in. c.l. pipe, Va. 4-404, from S. T. George, 201 E. Plume t., Norfolk. $50,744. CD 7/7—ENR 7/13.

CONTRACTS AWARDED

†Ga., Warner Robins — City, water and ewers, Ga. 9-238, to M. B. Kahn Constr. o., 714 Lady St., Columbia, S. C., $54,960. st. $51,260. FWA. CD 7/5—ENR 5/25.

Mass., Palmer—Town, test wells for Fire District, Three Rivers, to Edward F. Hughes, 53 State St., Boston. CD 6/8—ENR 6/15.

Mich., Inkster—Village, c.l. watermain extens., to Ivan Oliver, 4318 1 St., Wayne, $16,081.

†Mont., Great Falls—City, W. P. Harrison, clk., WW imprvs., Mont. 24-108-N, incl. water tank, to Dudley-Anderson Co., Great Falls, $148,131; watermains, to E. H. Blakeslee, Great Falls, $74,920. Bids 7/20—ENR 4/27.

N. J., Cedar Grove—Town, 12 in. water supply line, to C. Salvatore & Sons, 390 High St., Orange, $17,900. CD 9/28—ENR 9/30.

R. I., West Warwick—Pawtucket Valley Water Co., 1072 Main St., 14,000 ft. 12- to 16-in. c.l. water sys., to W. C. Ferguson, East Jaffrey, N. H., $45,700. CD 7/24—ENR 7/27.

†Wis., Merrimac—U. S. Eng., 408 Federal Bldg., Milwaukee, water distr. sys. at Badger Ordnance Plant, to Christofer & Co., Inc., 643 Green Rd., South Euclid, O., $259,027. Hercules Powder Co., 908 Market St., Wilmington, Del. will operate. Mason & Hanger Co., 500 5 Ave., New York, N. Y., engrs.-archts. Bids 7/14.

Wis., Milwaukee—Forest Home Cemetery, 2405 W. Forest Home Ave., deep well, to J. Egerer, 1012 N. 3 St., Zone 3. Est. $18,000. Bids 5/27. Mead, Word & Hunt, Madison, engrs.

Symbols and Abbreviations Include:

† Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD Engineering News-Record Construction Daily
A-E-M Architect-Engineer-Management type of contract

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Named in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings
Unclassified

Stages Reported

PROPOSED: (except Streets & Roads):
BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR):
LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.
CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

SEWERS, WASTE DISPOSAL

PROPOSED WORK

Conn., West Haven (br. New Haven)—Town, P. Wks., Town Hall, sanitary sewers in Circle St., Parmalee and Graham Aves. $30,000.

†Ill., Herrin — City, F. A. Henderson, mayor, 52,700 ft. 8 and 24 in. sanitary sewers, interceptors, outfall sewers, manholes. $154,000. FWA. G. H. Anderson, Annex Bldg., engr. CD 7/18—ENR 7/20.

Minn., Alexandria—City, H. S. Campbell, clk., imprv. sewage disposal plant. $25,000. Toltz, King & Day, 1509 Pioneer Bldg., St. Paul, engrs.

N. Y., Peekskill—Dpt. P. Wks., City Hall, 840 Main St., sewage treatment plant, sewerage sys. $250,000. J. Wilbur Irish, 906 South St., engr. for sewerage sys.

R. I., Cranton—City, Municipal Bldg., sewage disposal plant addn. $125,000.

Tex., San Antonio—Bexar County Water Control & Imp. Dist. 8, $25,000 bond election Aug. 19, disposal plant.

BIDS ASKED

Bids Asked August 10

Fla., Jacksonville—City Comrs., new incinerator and 4 in. well, South Jacksonville. $90,000. W. Shedden, city engr. CD 4/13—ENR 4/27.

Pa., New Castle—City, C. E. Brown, City Hall, clk., sewage disposal plant extns., alterations $60,000. J. Z. Street, City Hall, engr. Havens & Emerson, 1140 Leader Bldg., Cleveland, O., consult. engrs. CD 7/25—ENR 7/27.

Bids Asked August 11

Calif., El Sobrante—San Pablo Sanitary Dist., F. Garfield, secy., Firehouse, sewer imprvs. in Assessment Dist. 18. $251,000. Plans deposit $10. P. R. Jones, 2429 MacDonald Ave., Richmond, dist. engr. CD 7/20—ENR 7/27.

Bids Asked

†Ala., Mobile—City, R. C. Herndon, mayor, 2 sewage pump. stations and force main, Ala. 1-185N. FWA. J. B. Converse & Co., Wilson Bldg., engr.

LOW BIDDERS

Md., Towson—Comrs. Baltimore Co., Court House, July 20, sanitary sewers, water lines in Middle River, Contr. 83 S & W, from Marocco Constr. Co., 231 S. Exeter St., Baltimore, $31,882, CD 7/13, under Middle River; sanitary sewer in Baynesville, Contr. 845, from Eastern Constr. Co., 224 Albemarle St., Baltimore, $32,249, CD 7/13, under Baynesville.

CONTRACTS AWARDED

Conn., Greenwich—Town Dpt. P. Wks., Town Hall, storm sewers, Old Greenwich Section, to S. DeLuca & Co., 75 South Regent St. Portchester, N. Y., $46,000. S. E. Minor & Co., Inc., Smith Bldg., engr.

Conn., West Haven (br. New Haven)—Bd. Selectmen, 10,300 ft. 8- to 10-in. vitr. tile sewers, etc., to Bedford Hills Constr. Corp., 90 Hartland St., East Hartford, $29,337. Bids 7/21. CD 7/14.

Utah, Salt Lake City—Salt Lake Co., c/o R. Boden, chn. comrs., City & County Bldg., 30,000 lin. ft. 8- to 15-in. sanitary sewers at Magna, to Enoch Smith Sons Co., 1443 Beck St., $122,228. Est. $169,000. C. J. Ullrich, 432 Ness Bldg., engr.

†Wis., Merrimac—U. S. Eng., 408 Federal Bldg., Milwaukee, sanitary sewers and explosive residue drainage at Badger Ordnance Plant, to H. H. Frankamp, Mankato, Minn., $111,000. Hercules Powder Co., 908 Market St., Wilmington, Del., will operate. Mason & Hanger Co., 500 5 Ave., New York, N. Y., engrs.-archts. Bids 7/21.

Que., Ancienne Lorette—Dpt. National Defense (Air) Ottawa, Ont., sewage treatment plant at Air Observers School, to Richard & B. A. Ryan, Ltd., 1208 William St., Montreal, $30,000. Bids 6/27. CD 6/17—ENR 6/22.

BRIDGES

PROPOSED WORK

Colo., Trinidad—Colorado & Southern Ry. Co., H. R. Clarke, ch. engr., 547 W. Jackson St., Chicago, Ill., rebuilding bridge. $99,600

Conn., Thomaston—State Hy. Dpt., Hartford, preparing plans bridge. $25,000.

BRIDGES, etc. (Proposed Work, Cont'd.)

Tex., Beaumont—City, City Hall, making plans, repairing bridge over Brakes Bayou, $50,000. J. Reid, city engr.

BIDS ASKED

Bids Asked August 3

Iowa—State Hy. Comn., Ames, constructing 150x26 ft. continuous I-beam bridge and 0.143 mi. pavement on Iowa 150, FN 213, Cedar Co.; maintenance culvert repair flume and wood bridge on Iowa 127 and Iowa 37, M 4304, Harrison Co. F. R. White, Ames, ch. engr.

Wisconsin—State Hy. Comn., Madison, wing walls for North Water St. Bridge, $72 City of Sparta, S.P. 5798, Monroe Co. Plans deposit $1.

Bids Asked August 16

California—State Div. Hys., Sacramento, reconstructing portion bridge across Sacramento River, at Rio Vista, Sacramento Co. G. T. McCoy, state hy. engr.

LOW BIDDERS

Kentucky—Dpt. Hys., Frankfort, July 28, addn. of sidewalk and strengthening bridge over Cumberland River, Harlan Co., from Lyons & Breedon, Rogersville, Tenn., $36,-840. CD 7/10—ENR 7/13, under Roads.

CONTRACTS AWARDED

Washington—State Hy. Dpt., Olympia, 3 rein.-con. slab bridges, 3 rein.-con. culverts, etc., Primary State Hy. 10, Davis Canyon and Chilwist Creek, south of Malott, Secondary State Hy. 10A, Omak to Disautel, southeast of Omak, Little Nespelem River and Lucy Red Thunder Creek, southwest of Nespelem, to Rumsey & Co., 3821 Airport Way, Seattle, $29,933. Bids 7/18. CD 7/10.

West Virginia—State Road Comn., Charleston, substructure and south half of superstructure Lewis Overhead 1649, also south half superstructure Bridge 1585, both Kanawha Co., to Monty Bros., St. Albans, $91,666 and $109,069 respectively***substructure Bridge 1585, Kanawha Co., to The Foundation Co., 120 Liberty St., New York, N. Y., $137,423. Grand total $338,758. Bids 7/18. CD 7/7—ENR 7/13.

Quebec—Dpt. P. Wks., Quebec City, converting Quebec Saguenay-Chilbougaman Railway Bridge into highway bridge, over Saguenay River (Grande Decharde) between St. Joseph d' Alma and Ile Maligne, to Dominion Bridge Co., Ltd., Lachine, approx. $150,000. CD 8/15—ENR 8/16, under St. Joseph d' Alma.

Quebec—Dpt. P. Wks., Quebec City, 3 span, 300 ft. rein.-con. bridge at Ste. Rose du Degele, to Ed. Rotte, Lac Long-Temiscouata County, $40,000.

Que., Ste Edwidge de Clinton—Municipality, c/o E. Martineau, clk., bridge over Moes River, to Henri L. Roy, Lac Megantic, $27,-895. Dpt. P. Wks., Quebec City, engrs.

STREETS AND ROADS

BIDS ASKED

Bids Asked August 7

N. J., Hammonton—Town, Town Hall, bituminous surface treating Pine and Main Rds., Line St. and Cemetery Ave., involving 70,605 gals. tar and oil, 123,900 sq. sand cover. J. M. Adams, 305 Central Ave., engr.

Bids Asked August 8

Indiana—State Hy. Comn., S. C. Hadden, chn., Indianapolis, bituminous resurfacing 13.27 mi. sundry roads, Fort Wayne and Greenfield Hy. Dists., Contr. M-2528, Wells, Jay and Blackford Counties, 7.09 mi. Fort Wayne Hy. Dist., Contr. M-2529, Adams Co., 14.09 mi. LaPorte Hy. Dist., Contr. M-2531, La Porte and St. Joseph Counties, plans deposit on foregoing, $2.75 each; 1.9 mi. Greenfield Hy. Dist., Contr. M-2530, Madison Co.; 6.2 mi. La Porte Hy. Dist., Contr. M-2532, La Porte Co.; 8.48 mi. Seymour Hy. Dist., Contr. M-2533, Ohio and Dearborn Counties; 9.03 mi. La Porte Hy. Dist., Contr. M-2534, White and Cass Counties; 8.62 mi. Crawfordsville Hy. Dist., Contr. M-2535, Vigo and Clay Counties; 5.87 mi. Crawfordsville Hy. Dist., Contr. M-2536, Vigo Co., plans deposit on foregoing $1.75 each. R. Bower, State Hy. Comn., Indianapolis, ch. engr.

Iowa—State Hy. Comn., Ames, maintenance resurfacing 9.5 mi. Iowa 127 from Logan to U.S. 75, 11.4 mi. Iowa 183 from Monona Co. to U.S. 75, 5.7 mi. Iowa 300 from Modale to U.S. 30, M-4305, Harrison Co.; 9.8 mi. U.S. 59 from Mills Co. to U.S. 6, 24 mi. Iowa 100 from Treynor to Griswold, 1.3 mi. Iowa 362 from Macedonia to U.S. 50, M-4306, Pottawattamie Co.; 12.5 mi. Iowa 31 from Duniap to Earling, 10.5 mi. Iowa 191 from Portsmouth to Iowa 37, 5.9 mi. Iowa 168 from Irwin to U.S. 59, M-4307, Shelby Co.; maintenance bituminous surfacing Iowa 9 from south of Little Rock to Iowa 9, State MS-6, Div. 2, in Osceola Co., maintenance tiling U.S. 30 from city of Boon to Des Moines River, M-1293, Boone Co. F. R. White, Ames, ch. engr.

N. J., Linwood—City, City Hall, surface treating Seaview, Cambridge, Devonshire and Davis Aves. F. Steelman, 705 Shore Rd., engr.

O., Cincinnati—City, City Hall, concrete repaving Glenway Ave. from McKeone Ave. to Cleves Pike, $32,250. H. H. Kranz, City Hall, engr.

Pennsylvania—John U. Shroyer, secy. State Hy. Dpt., Harrisburg, bituminous surfacing, replacing portions existing pavement with plain cement concrete base, repairing existing arch on 3.1 mi. U. S. Route 202, Whitpain and Lower Gwynedo Twps., Montgomery Co.; rein.-con. paving, bituminous surface adjustment on 0.03 mi. Traffic Route 155, Annin Twp., also plate girder bridge over Annin Creek at Turtle Point, McKean Co. Plans deposit $2.50 ea. project.

West Virginia—State Road Comn., D. McClaugherty, secy., Charleston, road mix surfacing 1.25 mi. Shinnstown-McAlpin Rd. (Secondary Route 13) Defense Access Raw Material Army Proj. DARM 41-A(1), Harrison Co.; Kentucky rock asphalt surfacing 0.24 mi. High Level Bridge and 0.22 mi. along Merchants St. to underpass, also surface treating 0.34 mi. East Park Ave., all on State Route 73, S.P. 3674, Marion Co.; asphaltic concrete surfacing 0.9 mi. U.S. Route 19 to Secondary 53/2 Rd. (Secondary 19/5) Defense Access Raw Material Army Proj. 41-A (1), Monongalia Co.

Wisconsin—State Hy. Comn., Madison, sheet asphalt surfacing 0.456 mi. Main St., Fort Atkinson, U.S. Hy. 12, Contr. 1, S.P. 1783, Jefferson Co. Plans deposit $1.

Bids Asked August 10

Nebraska—Dpt. Roads & Irrigation, Lincoln, bituminous stabilized base course, prime coat, armor coat, bituminous material surface course, etc., 5.5 mi. Laurel-Wayne FAP 4(9) and 269-B(3), Cedar and Dixon Counties; 10.7 mi. Antioch-Ellsworth FAP 277-B(2) and 277-C (3), Sheridan Co.; bituminous surface treating (armor coat) 6.3 mi. Peru West Patrol 16811 State Rd., Nemaha Co.; sand gravel surfacing, bituminous material surface course, prime coat, armor coat 13.5 mi. Clay Center-Superior FAP 7-A (7) Nuckolls Co.; 2.3 mi. Cairo-Ravenna FAP 276-A(5), Hall Co.; 7.3 mi. Winslow-Uehling, FAP 304-C (3), Dodge Co.; sand gravel surfacing 4717 cu. yd. Tecumseh South, Table Rock-Lewiston and Steinauer East, Patrol 11012, 11014 and 11058, Johnson and Pawnee Counties; 3468 cu. yd. Pawnee City-Dubois-Kansas State Line, Pawnee City South and Dubois-Barnston Patrols 11015 and 11033, Pawnee Co.; 2946 cu. yd. Adams-Tecumseh, Patrol 11021, State Rd., Gage and Johnson Counties; 6858 cu. yd. Rockford-Pawnee City and Burchard South, Patrol 11025 and 11051 State Roads, Gage and Pawnee Counties; 3472 cu. yd. Rockford Tecumseh, Patrol 11029 State Rd., Gage and Johnson Counties; 3405 cu. yd. Steele City-Pawnee City, Barnston-Liberty and Liberty South Patrol 11037 State Roads, Gage Co.; 1,760 cu. yd. Johnson North and South Patrol 11050 State Rd., Nemaha Co.; 6,319 cu. yd. Brownville-Falls City, Howe-Harada and Steela West Patrols 11052, 11053, 11054 and 11055 State Roads, Nemaha and Richardson Counties; 1,180 cu. yd. Crete-Dorchester Patrol 19026 State Detour Rd., Saline Co.; 1,961 cu. yd. Tryon-Arnold and Thedford Patrols 71007 and 71051, Logan Co.; 5,151 cu. yd. Sargent-Ansley, Broken-Bow-Oconto and Broken Bow-Westerville Patrols 71014, 71018 and 71052 State Roads, Custer Co.; 3,097 cu. yd. Westerville-Arcadia Patrol 71017 State Road, Custer and Valley Counties; 3,493 cu. yd. Ansley-Loup City and Mason City North Patrols 71019, 71020 State Roads, Custer Co.; 3,028 cu. yd. North Platte-Stapleton, North Platte-Tryon and Tryon-Mullen Patrols 71033, 71034 and 71042 State Roads, Lincoln and McPherson Counties; 2,532 cu. yd. North Platte-Stapleton Patrols 71035 State Road, Lincoln and Logan Counties; 2,319 cu. yd. Dunning-Ainsworth Patrol 71040 State Road, Blaine Co.; 4,510 cu. yd. Burwell-Ericson Patrol 81037 State Road, Garfield and Wheeler Counties; furnishing 1,700 tons bituminous aggregate for repairing Uehling-Oakland Patrol 26816 State Road, Dodge Co.; furnishing bituminous aggregate for 6 mi. Ellsworth-Bingham Patrol 57902 State Road, Sheridan Co. W. G. Scott, state engr.

Bids Asked August 11

Kansas—State Hy. Dpt., La Crosse, single asphalt surface treating 6.32 mi. K 5033, Rush Co. R. C. Keeling, Topeka, engr.

Minnesota — State Hy. Dpt., St. Paul gravel base repairs on 15.3 mi. S.P. 0603-04-(TH 12-26) between Ortonville and E County line. Plans deposit $3.40. gravel base; 7.2 mi. S.P. 5602-03(TH 3-36) between Fergus Falls and 1 mi. west of Underwood, Plans deposit $3.05; 4 mi. S.P. 7608-06(TH 29-38) between 3½ mi. north of Benson to north Swift co. line. Plans deposit $0.70. O. L. Kippi, St. Paul, ch. hy. engr.

Neb., Gordon—City, Wm. D. Reed, mayor, street paving $29,457. H. H. Henningson, Standard Oil Bldg., Omaha, engrs.

Bids Asked August 16

California—State Div. Hys., Sacramento, asphaltic concrete resurfacing 0.9 mi. between Alameda Contra Co. line and San Pablo Ave., Contra Costa Co.; repairing with plant mix surfacing and seal coat 3.5 mi. road between 2 mi. west of Wasco and 4.7 mi. west of Famoso, Kern Co. G. T. McCoy, state hy. engr.

Bids Asked

Iowa—State Hy. Comn., Ames, rejected bids July 25, imprv. M-6291, Benton Co. Received no bids July 25, imprv. 3.3 mi. Henry Co., 15.1 mi. Lee Co., M-4304, Guthrie Co., Div. 2, MS-6. CD 7/17—ENR 7/20.

Ia., Grundy Center—Bd. Superva. Grundy Co., rejected bids July 24, gravel surfacing various secondary roads. CD 7/11—ENR 7/13.

LOW BIDDERS

Alabama—State Hy. Dpt., Montgomery, grading, draining, bituminous paving, 2.945 mi. Bessemer-Pyne Mine Rd., Jefferson Co., from Wright Contg. Co., 1st Natl. Bank Bldg., Columbus, Ga., $179,863. Bid 7/21.

Idaho—At office Commissioner P. Wks., Boise, July 28, imprv. 4 mi. Clearwater Co., from Northwestern Engraving Co., Rapid City, N. D., $28,605, est. $18,675***9.243 mi. Idaho Co. from Standard Asphalt Paving Co., Chronicle Bldg., Spokane, Wash., $37,752, est. $31,568***11.198 mi. Custer Co., from Morrison-Knudsen Co., 319 Bway., Boise, $24,560, est. $28,115***7.305 mi. Bonneville Co., from H. A. Gardner, Blackfoot, $40,366, est. $47,514***5.12 mi. Kootenai Co., from D. A. Sullivan, Parkwater, Wash., $48,196, est. $42,446***15.008 mi. Fremont and Teton Counties, from N. Burggraf, Idaho Falls, $49,239, est. $55,681. CD 7/21—ENR 7/27.

★**Kentucky**—Dpt. Hys., Frankfort, July 24, from L. G. Arnold, Inc., Eau Claire, Wis., imprv. 4.619 mi. Butler Co., $77,924***from Allen & Codell Co., Winchester, 20.421 mi. Clay and Jackson Counties, $249,639***from R. B. Tyler Co., 1446 Levering St., Frankfort, 29.911 mi. Clay and Leslie Counties, $345,585***from Fuller-Daviess Co., Frankfort, 1.601 mi. Grayson Co., $43,475***from Codell Constr. Co., Winchester; 5.356 mi. Lawrence Co., $284,478***from O. V. Arnett, Berea, 5.128 mi. Lawrence Co., $166,334*** from White Consolidated, Inc., 1735 W. Fullerton St., Chicago, Ill., 15.021 mi. Union and Webster Counties, $74,715; 16.345 mi. Boone and Kenton Counties, $53,650; 9.717 mi. Scott Co., $40,575***from Oman Constr. Co., Acklen Park, and Foster & Creighton Co., American Natl. Bank Bldg., Nashville, Tenn., 3.216 mi. Whitley Co., $148,859. Dpt. Hys., Frankfort received no bids July 24, imprv. 13.304 mi. Leslie Co.

Louisiana—State Dpt. Hys., Baton Rouge, July 26, imprv. 172.6 mi. Sabine Parish, from Carruth Contg. Co., National Bank Bldg., Baton Rouge, $154,456. CD 7/17—ENR 7/20.

Md., Baltimore—City, July 21, sheet asphalt paving Lombard St., from National Paving & Contg. Co., Menlo Dr. and W. M. R. R., Baltimore, $48,635. CD 7/13.

★**Nebraska**—Dpt. Roads & Irrigation, Lincoln, July 20, imprv. 9.6 mi. Butler Co., from Peter Kiewit Sons Co., Omaha Natl. Bank Bldg., Omaha, $515,935***15.1 mi. Hitchcock Co., from Krotter Bros., Palisade, $217,633***13.6 mi. Butler and Polk Counties, from Francis R. Orshek Co., Fremont, $181,778***5.5 mi. Webster Co., from Steele Bros., Dorchester, $77,567***3 mi. Nuckolls Co., from Dobson & Robinson, 823 1st Natl. Bank Bldg., Lincoln, $115,868. Rejected bids July 20, imprv. 13.5 mi. Nuckolls Co. Received no bids July 20, grading, gravelling, culverts 0.6 mi. Knox Co. CD 7/14.

Pennsylvania—State Dpt. Hys., Harrisburg, July 25, imprv. 0.32 mi. Indiana Co., from B. Ferrari (Latrobe Constr. Co.), P. O. Box 150, Latrobe, $159,755***0.29 mi. Montgomery Co., from Tri-County Constructors, High School Rd. and Harrison Ave., Elkins Park, Phila., $43,751***7.73 mi. Fayette Co., from Roy Furman, Wayneaburg, $246,407. CD 7/14—ENR 7/20.

†**R.I., Newport**—At office G. C. Easton, City Hall, comr. P. Wks., City Hall, July 18, Proposal A, repairing, resurfacing Brenton Rd., Narragansett and Carroll Aves., and Proposal B, same as above, plus repairing Annadale Rd., RI-37-164-N, from Dwyer Bros., Inc., and C. J. Fanning Const. Co., 225 Girard Ave., Proposals (A), $44,858; (B), $51,947. FWA. CD 7/13.

CONTRACTS AWARDED

Conn., East Hampton—Town Bd. Selectmen, 94 Main St., rebuilding 1 1/2 mi. Waterhole Rd., own forces, $41,000.

Florida — State Road Dpt., Tallahassee, imprv. 17.443 mi. Escambia, Okaloosa and Santa Rosa Counties, to Smith Eng. & Constr. Co., West Pensacola, $93,774***19.591 mi. Gadsden and Washington Counties, to Cogin & Deermont, Chipley, $81,592***4.376 mi. Highlands and Polk Counties, to Marion Contr. Co., Ocala, $96,387. Grand total $271,753. Bids 7/18. CD 7/5.

Idaho—State Dpt. P. Wks., Bureau Hys., Boise, imprv. 4.068 mi. Kootenai Co., to Roy L. Bair & Co., 1220 Ide St., Spokane, Wash., $35,926. Est. $32,102; 9.213 mi. Twin Falls Co., to Hopps Constr. Co., Twin Falls, $113,838. Bids 7/21, awarded 7/21. CD 7/12.

REETS, etc. (Contracts Awarded, Cont'd.)

, New Hampton—Bd. Supervs. Chickasaw Co., Naomi Drape, aud., graveling various secondary roads, to Roverude Bros., ing Grove, Minn., $43,796. Bids 7/31.

, Detroit—City, Dpt. P. Wks., City repaving over watermain trench and at intersections on Meyers Rd., to Detroit Asphalt Paving Co., 702 Transportation Bldg., $96,375.

—State Hy. Dpt., St. Paul, 1.1 mi. State Proj. 4304-03. (TH 71) to Woodrich Constr. Co., 405 Lumber Exchange, Minneapolis, $50,068. Bids 7/14. 4/21—ENR 7/6.

, Le Center—Le Sueur Co., loading, reading 47,100 cu. yd., hauling 488,670 cu. on various roads, own forces. Est. $45,000. Bids 7/11 rejected. CD 6/23—ENR 7/6.

—State Hy. Dpt., Jefferson City, 9.712 mi. St. Louis Co., to Israel Clayton, $139,355. Bids 7/7, awarded CD 7/12—ENR 7/20, under LB.

, Kansas City—City c/o K. K. King, F. Wks., City Hall, resurfacing Prospect from 19 St. to Swope Parkway, 15 St. Jackson St. to west line of Van Brunt Wornall Rd., from 63 to 75 Sts., to West ProCote Co., 7600 E. 17 St., $53,240.

, Nebraska—State Dpt. Rds. & Irrigation, Lincoln, imprv. 10.2 mi. Cheyenne Co., to th & Olsen, Inc., 622 Insurance Bldg., ux City, Ia., $600,524. Bids 6/29. CD 7/1—R 7/11, under LB.

N. J., Jersey City—U. S. Eng., 120 Wall New York, N. Y., new pavements, to Baso Const. Corp., 220 E. 42 St., New rk, N. Y., $421,726.

, J., Palisades Park — Interstate Park mn., Admin. Bldg., Bear Mountain, N. Y., prv. roads in Interstate Park, to Ward w, Beach St., Haverstraw, N. Y., over 0. Bids 6/26. CD 6/21.

New Mexico—State Hy. Dpt., Santa Fe, ding, surfacing, minor drainage structe, etc. 7.6 mi. U.S. Hy. Rte. 64, and State Rte. 106, Rio Arriba Co., to P. Haake, 21 Sierra Vista, Santa Fe, $32,913***. thing, surfacing, reprocessing, sealing 2 mi. Hy. 3, San Miguel and Mora Counto A. O. Peabody, Box 1724, Santa Fe, 1,413***surfacing, processing, sealing 1 mi. Rte. 58, Colfax and Union Counties, Henry Thygesen & Co., Box 876, Albuerque, $55,727. Grand total $130,052. Bids 1.

North Carolina—State Hy. & P. Wks., nn., Raleigh, imprv. 1.37 mi. Wilson Co., F. D. Cline, Box 249, Raleigh, $42,664. V. Baise, engr. CD 7/11—ENR 7/13. der LB.

Washington—State Hy. Dpt., Olympia, nt bituminous surface treating and stockng on 8.03 mi. Primary State Hy. 18, an to St. John, Whitman Co., to Roy L. ir, 1230 Ide St., Spokane, $53,321. Reted bids July 15, imprv. Primary Hy. 5, g Co. CD 7/10.

Wyoming—State Hy. Comn., Cheyenne, prv. 5.641 mi. Park Co., to Taggart Constr. Cody, $187,922. Conditional award. s 7/25, awarded 7/25. CD 7/14.

Ont., Hamilton—Barton Twp., c/o A. W. oughton, 199 E. 24 St., 1½ mi. stabilized da to A. Cape Sons, Ltd., 19 Albert about $30,000. CD 6/30—ENR 7/6.

Quebec — Provincial Govt., Quebec City, phalt resurfacing 30 mi. roads, Shefford, Lebee Constr. Ltd., 5571 Canterbury St., ntreal, $243,000. E. Gohier, Dpt. Roads, ebec City, engr.

Quebec—Provincial Dpt. Roads, Quebec y, 1½ mi. highway between St. Pierre St. Laurent on Isle of Orleans, to Geo. Roy, 286 St. Louis Rd., Quebec City, 000; grading, graveling Temiscamingpawa Rd., to H. Lyn, Temiscaminque, 000.

EARTHWORK, WATERWAYS

POSED WORK

rk., Carlisle—P. G. Keebey, et al, 2508 h St., Little Rock earthen dam, concrete llway, 12 mi. south of here. Seeking per- from Arkansas Utilities Comn.

ont., Jordan—Montana Water Conservaa Bd., Helena, rejected bids July 6, rein.- spillway, $75,000. Fred Buck, Helena, engr. CD 6/21—ENR 6/29.

J., New Providence—Union Co., Courtse, Elizabeth, rubble stone, masonry and n C cement dam near Plainfield Ave. r $20,000.

G ASKED

Bids Asked August 10

Massachusetts—U. S. Eng., 31 St. James ., Boston, dredging Cape Cod Canal, No. 23-45-NEG 5.

Bids Asked August 14

., Carroll—Bd. Supervs. Carroll Co., conting Drainage Imprvt. 102, $9,000 cu. yd. excav., 17,199 ft. open ditch, etc.

Bids Asked August 16

California—State Div. Hys., Sacramento, heavy stone riprap and rock mattress and permeable pile jetties, 0.1 mi., at Dyerville, Humboldt Co. G. T. McCoy, state hy. engr.

Bids Asked August 18

†**La., New Orleans**—U. S. Eng., foot of Prytania St., excavating approx. 2,350,000 cu. yd. earthwork, etc. for channel excav. and disposal excavated material between miles 28.4 and 39.5 on 9x100 ft. Vermilion Proj. New Orleans Dist., Solic. No. 16-047-45-3.

†**Tex., Austin**—Bureau Reclamation, S. O. Harper, ch. engr., Denver, Colo., dehumidifying and ventilating equip. for gate operating galleries, Marshall Ford Dam. Spec. 1758-D.

Bids Asked

†**La., Baton Rouge**—U. S. Eng., foot of Prytania St., New Orleans, Zone 9, earthwork, etc., Pontchartrain Levee Dist., Sol. No. 16-047-45-2. Over $25,000.

LOW BIDDERS

†**La., New Orleans**—U. S. Eng., foot of Prytania St., July 17, lock entrance imprvs., incl. creosoted timber guide wall exten., earth excav. and levees, riprap bank paving, etc., Sol. No. 16-047-44-135, from J. Ray McDermott & Co., Inc., Harvey, $49,578. CD 7/7.

CONTRACTS AWARDED

★†**Arkansas, Kentucky, Mississippi and Tennessee**—U. S. Eng., P. O. Box 97, Memphis, Tenn., 732,000 cu. yd. levee work, Golden Lake, Ark., to Driver Contracting Co., Cotton Exchange Bldg., and W. L. Sharpe Contracting Co., Columbian Mutual Trust Bldg., both Memphis, Tenn., $205,240 ***420,000 cu. yd., levee work, Osceola, Ark., to Jones-Gillis Contracting Co., McComb, Miss., $154,350***557,000 cu. yd. Pecan Point and 494,000 cu. yd. Joiner, both Ark., to La Plant & Ingram and C. W. Vollmer Co., Turrell, Ark., $345,829, foregoing in Lower St. Francis Levee Dist., Mississippi Co., Ark.***556,000 cu. yd. levee work, Jericho, Lower St. Francis Levee Dist., Crittenden Co., Ark., to Gerald Smith Contracting Co., Memphis, Tenn., $189,040***203,000 cu. yd. levee work, White River Levee Dist., Knowlton, Desha Co., Ark., to C. T. Watts, Rochdale, Miss., $76,125***430,000 cu. yd. White River Levee Dist., Henricho, Desha Co., Ark., to D. B. Hill, 115 N. Spring St., Little Rock, Ark., $98,255***506,000 cu. yd. levee work, Reelfoot Levee Dist., Miller Station, Fulton Co., Ky., to S. W. Hardwick & Co., Beardstown, Ill., $130,295***541,000 cu. yd. Upper Yazoo Levee Dist., Walls, Mis., vicinity of De Soto Co., Miss., and 382,000 cu. yd. Upper Yazoo Levee Dist., vicinity of De Soto Co., Miss. and Shelby Co., Tenn., to W. A. Craig, Bauxite, Ark., $313,820***213,000 cu. yd. levee work, Reelfoot Levee Dist., Solic. 44-51, Phillippy, 200,000 cu. yd. Reelfoot Levee Dist., Phillippy, and 334,000 cu. yd. Reelfoot Levee Dist., Markham, both, Solic. 44-52, all in Lake Co., Tenn., to Pioneer and Sander, Dyersburg, Tenn., $253,233. Grand total $1,766,187. Bids 7/3. CD 6/12—ENR 6/15, under "Tennessee and Arkansas".

★†**La., New Orleans**—U. S. Eng., foot of Prytania St., 2,220,000 cu. yd. earthwork on Mississippi River Levees in Lower Tensas Levees, Inv. 16-043-44-134, Item R-365.6, Ferriday Levee, Plan B, Items B, C and F, and 2,410,000 cu. yd. earthwork, Vidalia Point Levee, Plan B, Inv. 16-047-44-134, to H. B. Blanks Co., P. O. Box N, St. Joseph, 17.06c and 13.25c per cu. yd. all or none respectively. Bids 7/7.

†**Mass., Boston**—U. S. Eng., 31 St. James Ave., Boston, grading, filling work, constructing drains, Castle Island, No. 19-023-45-NEG 7. to C. J. Maney Co. Inc., 24 Dane St., Somerville, $31,814.

N. J., Jersey City—City, timber bulkhead east side Mill Creek, south of Grand St., to New Jersey Asphalt & Paving Co., foot of Howell St., over $30,000. Bids 6/20. CD 6/15.

Quebec—Provincial Govt., c/o Ministry of Agriculture, Quebec City, drainage farm lands at St. Bathelemy and Lanoraie, day labor, $36,000 and $100,000 respectively.

LATIN AMERICA

Brazil, Cabo Frio—National Acalis Co. of Brazil, Cabo Frio, plans caustic soda and salsoda factory. $300,000.

Mexico—Territory of Baja California, Mexicali, will construct and repair waterworks in cities of Tijuana and Mexicali, by own forces. $100,000. Maximino Camacho, dir. P. Wks., approved project.

Mexico—Territory of Baja California, Mexicali, will construct and repair sewerage in cities of Tijuana and Mexicali, by own forces. $100,000. Maximino Camacho, dir. P. Wks., approved project.

Mexico—Territory of Baja California, Mexicali, will construct and repair roads and hys. in cities of Tijuana and Mexicali, by own forces. $100,000. Maximino Camacho, dir. P. Wks., approved project.

Mexico—Territory of Baja California, Mexicali, will construct and repair bridges, in cities of Tijuana and Mexicali, by own forces. $50,000. Maximino Camacho, dir. P. Wks., approved project.

Mexico—Lower California Territory Government, Palacio del Territorio, Mexicali, B. C., plans sewerage imprvs. in Mexicali and Tiajuana, Lower California Territory. $325,000.

Mexico, Guadalajara — National Defense Ministry (Aviation Branch), Presidential Palace, Mexico City, will construct military airport by own forces. $350,000. Maximo Camacho, Fed. Dir. P. Wks., approved project.

Mexico, Guanajuato—Ministry of Finance, Palacio Nacional, Mexico, D. F., plans federal bldg. $250,000.

Mexico, Huatusco — City, Rogelio Viezca, local health representative, will construct water sys. and sewers by own forces. $100,000.

Mexico, Irapuato—City of Irapuato, Municipal Presidente, Jose Campos Ortiz, takes bids within 35 days constructing school. $400,000.

Mexico, Mexicali—Baja California, Territory of B. C., Eligio Esquivel, irrigation dir., Capital City, Mexicali, plans dam, hydro-electric plant, near here, using Colorado River to irrigate vicinity of Mexicali. $1,200,000.

Mexico, Mexico City—City, Xavier Rojo Gomez, mayor, will construct small water sys. in various suburbs incl. Los Alamos and Narvarte, by own forces. $250,000.

Mexico, Mexico City—Dpt. Public Works, Maximo Camacho, dir., 5th of May St., will take bids within 90 days constructing government bldg. to house expositions, industrial conventions, etc. $400,000.

Mexico, Mexico City—Federal Dpt. Educ., Jaime Bodet, secy., Presidential Palace, Mexico City, will construct Normal School center, Calles del Fresno and Sor Juana Ines de la Cruz, by own forces. $1,500,000. Jose Villagran Garcia, Mexico City, archt. CD 4/4—ENR 4/6.

Mexico, Mexico City—Federal Health Ministry, Dr. Gustavo Baz, secy., Presidential Palace, will take bids in October, 400 bed hospital to be called "Morelia". $600,000.

Mexico, Monterrey—City, J. P. Mata, in charge of road construction, plans constructing, repairing Villaldama Hy., during last half 1944. $400,000.

Mexico, Monterrey—State of Nuevo Leon, Governor Arturo B. de La Garza, Monterrey, will construct new water systems and sewerage and repairing existing ones, by own forces. $550,000.

Mexico, Nogales—State of Sonora, Governor Adelardo L. Rodriquez, Capital City, Hermosillo, will construct hospital for farmers in Yaqui Valley, by own forces. $250,000.

Mexico, Tetitlan—National Common Public Lands Credit Bank, V. Carranza, No. 51, Mexico, D. F., plans sugar central for agrarians and workmen. $100,000.

Mexico, Torreon—Bank of Mexico, 5 de Mayo 2, Mexico, D. F., plans by Gonzalo Garita, Juarez, No. 50, Office 1, Mexico, D. F., 6 story, rein.-con., granite branch office bldg., with underground vaults and safe deposit box department. $400,000.

Mexico, Tuxtla Gutierres—State of Chiapas, Dr. Rafael P. Gamboa, in charge Public Works, Capital City, plans public works last half 1944, incl. roads and highways, electrification, irrigation, WW, sewerage, bridges and schools. $1,500,000.

Mexico, Vera Cruz — Marine Ministry, Heriberto Jara, secy., Presidential Palace, Mexico City, plans docks at port of Vera Cruz. $450,000.

Mexico, Victoria—City, Guadalupe Villarreal, dir. Educ., takes bids within 100 days, constructing school. $165,000.

Mexico, Villa Hermosa—State of Tabasco, Sala Rueda, head local committee, Villa Hermosa, plans airport. $500,000. Presented for approval to Natl. Dpt. P. Works, Maximino Camacho, dir. for approval.

South America, Bogota — Phillips Petroleum Co., Bartlesville, Okla., developing several deep test oil wells, storage facilities, etc.

PUBLIC BUILDINGS

PROPOSED WORK

★**Ala., Mobile**—City, plans by T. Cooper Van Antwerp, 216½ S. Francis St., hospital, modernization, addn., St. Anthony St. $500,000. Applied to FWA.

†**Ark., Hot Springs**—U. E. Eng., 300 Bway., Little Rock, remodeling 2 floors of Hotel De Soto for clinic.

†**Conn., Groton (br. New London)**—Pub. Housing Auth., NHA, 24 School St., Boston, Mass., brick, concrete boiler house, Conn.

PUBLIC BLDGS. (Proposed Work, Cont'd.)

6216. Payne & Keefe, 321 State St., New London, engrs.

†La., Lake Charles—Calcasieu Parish School Bd., plans by Dunn & Quinn, 527 Hodges St., school bldg. $292,000. FWA funds allotted. CD 6/8—ENR 6/15.

†La., Weeks Island—Pub. Housing Auth., NHA, 1205 Electric Bldg., 7 and Taylor Sts., Fort Worth, 2, Tex., plans by Dunn & Quinn, Lake Charles, 24 unit family housing, La. 16107. CD 7/19—ENR 7/27.

†Md., Baltimore—City, Pub. Imprvt. Com., plans by Buckler & Fenhagen, 325 N. Charles St., 3 story, bsmnt., brick, elementary and junior high school bldg., Md. 18-200. $200,000. FWA. J. Posey, 10 E. Pleasant St., mechanical engr.

†Mass., Lowell—St. John's Hospital, Bartlett St., plans by E. T. P. Graham, 171 Newbury St., nurses training bldg., Mass. 19-200-N. $35,000. FWA. CD 6/7—ENR 6/15.

†Mass., Springfield—Springfield College, 263 Alden St., plans by McClintock & Craig, Inc., 458 Bridge St., general alterations bldg. for convalescent center for sailors. $75,000. FWA.

†Mass., Taunton—Morton Hospital, 88 Washington St., plans by Howe & Prout, 1616 Turks Head Bldg., Providence, R. I., completing 3rd floor hospital for nurses accommodations, Mass. 19-205-N. $20,000. FWA.

†Mich., Berkley—Berkley School Dist., Berkley, plans by Lane Davenport & Meyer, 806 Farwell Bldg., 1 story, brick, concrete school, Mich. 20-350 N. $55,000. FWA. CD 7/17—ENR 7/20.

Mich., Detroit—Bd. Educ., 1354 Bway., plans by Malcolmson, Calder & Hammond, 1319 Griswold St., 1 story, bsmnt., rein.-con., steel, brick school. $170,000.

†Mich., Wayne—Pub. Bldgs. Admin., 18 and F Sts. N.W., Wash., 25, D. C., 1 story, 75x127 ft., recreation bldg., Mich. 20-335. FWA.

Mo., Rock Hill—Rock Hill School Dist., T. D. Adams, supt., 9420 Manchester Rd., Rock Hill, St. Louis, Zone 19, plans by E. T. Friton, Security Bldg., 4 and Locust Sts., St. Louis, Zone 2, school, Warson Rd. and O'Day Ave. $150,000. Will apply to FWA. CD 6/23—ENR 6/29.

Texas, Humboldt—City Bd. Educ., c/o Supt. Schools, Humboldt, Senior High School Bldg. $150,000—$200,000.

†Tex., Brady—Pub. Housing Auth., NHA, 1205 Electric Bldg., 7 and Taylor Sts., Fort Worth, plans by Smith, Pitts & McPherson, Alamo Natl. Bldg., San Antonio, 20 unit family stop gap housing, Tex. 41658. CD 7/19—ENR 7/27.

Tex., Robstown—Bd. Educ., Robstown, plans by E. E. Hamon, 715 S. Tancahua St., Corpus Christi, school bldg. $150,000.

Va., Alexandria—City Manager, City Hall, sketches by Div. School Bldg., State Dpt. Educ., State Office Bldg., Richmond, gymnasium and swimming pool bldg. $250,000.

Va., Portsmouth—Bd. Supervs. Norfolk Co., County Court House, plans by Rudolph, Cooke, & Van Leeuwen, 956 Monticello Arcade Bldg., Norfolk, administration bldg. $250,000.

Yukon Territory, Whitehorse—Dominion Govt., c/o Dpt. Agriculture, engrs., Ottawa, Ont., experimental substation, 800 acres on Alaska Hy. $200,000.

BIDS ASKED

Bids Asked After August 1

†Conn., Groton—Bd. Educ., Town Hall, temporary elementary school Conn. 6229 F. $26,000. FWA. L. F. Caproni, 1221 Chapel St., New Haven, archt. CD 7/20—ENR 7/27.

Bids Asked August 8

†N. C., Morganton—Grace Hospital, Inc., Morganton, 3 story, nurses home addn., N.C. 31-291. $39,400. FWA. Plans deposit $15. V. W. Breese, 709 W. Sumter St., Shelby, archt. CD 6/13—ENR 6/15.

Bids Asked August 9

†Me., South Portland (br. Portland)—Pub. Housing Auth., NHA, 24 School St., Boston, Mass., drainage, grading, site imprvs. for housing, Me. 17032 and 17033. Plans deposit $50 first set and $10 each addnl. set.

†S. C., Greenwood—Pub. Bldgs. Admin., 18 and F Sts., N.W., Wash., 25, D. C., altering heating sys. at U. S. Post Office. FWA.

Bids Asked August 10

†Georgia—Federal Works Agency, Candler Bldg., Atlanta, three 1 story, concrete block child care bldgs., 1 each at Avondale, Scottdale and Brookhaven. F. M. Daves, 774 Spring St. N.W., Atlanta, archt.

Bids Asked About August 10 to 15

†Oregon—Bureau Reclamation, Dpt. Interior, Bend, power plant addn., Cove Park, Deschutes Project. CD 6/7—ENR 6/15.

Bids Asked August 11

†Okla., Midwest City—Pub. Bldg. Admin., 18 and F Sts. N.W., Wash., 25, D.C., 1 story, part bsmnt. school and recreational bldg., Okla. 34-173-A. FWA. Extended date., Huddins Ball & Associates, 919 Cotton Exchange Bldg., Oklahoma City, archts. CD 7/13—ENR 7/20.

Bids Asked August 15

†N. C., Kinston—Eastern Carolina Hospital, Corp., Kinston, 2 story, bsmnt., brick nurses' home for Memorial General Hospital, N.C. 31-295. $67,300. FWA. Plans deposit $15. J. J. Rowland, 330 N. Queen St., archt. CD 7/13—ENR 7/20.

†N. D., Minot—St. Joseph's Hospital, Mother B. Celsa, pres., nurses' home, N.D. 32-104-N. $160,000. FWA. W. F. Kurke, Fargo, archt. CD 7/25—ENR 7/27.

Bids Asked August 16

O., Barton—Auburn Local Bd. Educ., c/o Mrs. Ethel Ayers, clk., R.D. No. 3, Chagrin Falls, 2 story, 120x180 ft. brick, steel, concrete high school. $150,000. M. Gilbert Miller, 12 W. Madison Ave., Youngstown, archt.

Bids Asked August 16

†Pa., Chester—Pub. Bldgs., Admin., 18 and F Sts. N.W., Wash., 25, D. C., 1 story, recreation bldg., Pa. 36-199. $301,625. FWA. Extended date. H. R. Robinson, 1927 11 St. N.W., Wash., D. C., archt. CD 7/19—ENR 7/27.

Bids Asked August 17

†Ill., Worth Twp. (Chicago)—Worth Twp. School Dist. 122, 1 story, 166x190 ft., brick school, Ill. 11-301. $130,000. FWA. P. D. McCurry & Uda Koerner, 9350 S. Mailton Ave., Chicago, archts. H. W. Olmstead, 277 U. S. Court House, Chicago, engr. CD 7/27—ENR 6/22.

Bids Asked August 21

†Tenn., Tullahoma—City, D. B. Campbell, mayor, 2 story, bsmnt., brick hospital, Tenn. 40-190. $150,000. FWA. Warfield & Keeble, Nashville Trust Bldg., Nashville, archt. CD 7/27—ENR 3/23.

Bids Asked August 22

★†Conn., Naugatuck—Chemical Div. U. S. Rubber Co., c/o Fletcher Thompson, Inc., engrs., 211 State St., Bridgeport, 2 story, 40x110 ft., plant bldg., and 2 story, 80x180 ft. machine shop and laboratory. Over $500,000. Defense Plant Corp. will finance.

S. C., Orangeburg—State Colored Normal, Industrial Agricultural & Mechanical College of South Carolina, Orangeburg, Dr. M. F. Whitaker, pres., new boilers, accessories and connections to existing heating plant, new chimney and boiler house. Plans deposit $10. E. W. Klein, 152 Nassau St. N.W., Atlanta, 3, Ga., engr.

Bids Asked Latter Part of August

†Ill., Champaign—Burnham City Hospital, c/o A. C. Meyer, pres. Bd. Directors, 310 E. Springfield St., and M. G. Hoaglund, supt., on premises, 300 E. Stoughton St., brick, rein.-con. hospital addn. incl. power plant and nurses' home, Ill. 11-298-N. $300,000. FWA. F. E. Berger & R. L. Kelly, 518 Lincoln Bldg., archts. CD 7/12—ENR 7/20.

Bids Asked September 1

†Ind., Indianapolis—Indiana University, W. G. Biddle, secy. Bd. Trustees, Union Bldg., Bloomington, 3 story, bsmnt., rein.-con., structural steel nurses' home, Medical Center, W. Michigan St., Ind. 12-135-N. $400,000. FWA. Plans deposit $35. McGuire & Shook, 1400-01 Fletcher Trust Bldg., archts. CD 6/5—ENR 6/8.

Bids Asked

†Conn., Waterbury—Pub. Housing Auth., NHA, 24 School St., Boston 8, Mass., management and maintenance bldg., Conn. 6206. E. J. Richmond, 174 Grand St., archt.

†Conn., Willimantic—Pub. Housing Auth., NHA, 24 School St., Boston 8, Mass., new road and drainage, Conn. 6181. CD 7/21—ENR 7/27.

LOW BIDDERS

★†Calif., Oxnard—Pub. Housing Auth., NHA, 785 Market St., San Francisco, portable dwellings, Calif. 4861, from E. A. Kaiser Company 8825 W. Olympic Blvd., Beverly Hills, Los Angeles, $500,000. CD 6/7—ENR 6/15.

†D. C., Wash.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Zone 25, July 26, Waves Barracks, Quarters D, Nebraska and Massachusetts Aves., NOY 9844, from Caulway, Inc., 1841 Bway., New York, N. Y., $349,000. CD 7/5—ENR 6/22.

Ga., La Grange — City Bd. Educ., high school, from Modern Movable Homes, P.O. Box 1930, Opa Locka, Fla., $397,000. Bids 7/26. CD 6/29—ENR 7/6.

†Ill., Downey—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash., 25, D.C., July 25 Boiler House Bldg. 33, addn. Proj. 2261, from Peter Hamlin Co., 9 S. Clinton St., Chicago, $79,700. CD 7/11—ENR 7/13.

†Md., Indian Head—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., July 26, laboratories, magazines, etc., Naval Powder Factory, NOY 8931, from Jos. Light Constr. Co., 1436 Kennedy St. N.W., Wash., D. C., $180,976. CD 7/21.

★†Va., Alexandria—Pub. Housing Auth., NHA, Temporary Bldg. 2, 19 and D Sts. N.W., Wash., 25, D.C., July 25, 166 unit family dwellings, Va. 4-3, from Tobias Heller & Co., Inc., 441, Lexington Ave., New York, N. Y. $734,000. CD 7/21—ENR 7/13.

★†Va., Norfolk—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., July 20, addnl. storage facilities for ordnance materials, NOY 9646, from Virginia Engrg Co., Melson Bldg., Newport News. $864,300. CD 7/19—ENR 7/13.

★†Ont., Toronto—Secretary Dpt. P. Wks., Ottawa, July 26, military hospital bldgs. at Sunnybrook Farm, North York, from Redfern Constr. Co., Ltd., Excelsior Life Bldg., $3,000,000. CD 7/11—ENR 7/13.

CONTRACTS AWARDED

†Calif., Fontana—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, steam and oil sys. at 155 MM shell plant (Kaiser) No. 3, to Hickman & Ritter, 2411 Charnwood Ave., Los Angeles, $51,170. Bids 7/13.

Ia., Hampton—City, power plant, to National Supply Co., Springfield, $49,900. Stanley Eng. Co., Central State Bank Bldg., Muscatine, engrs.

†Md., Baltimore—U. S. Eng., Standard Oil Bldg., Baltimore, constructing modifications of existing warehouse, Holabird Signal Depot, Contr. W-18-020- eng-547, to Charles R. Scrivener Co., Inc., Old Frederick Rd. and Charing Cross, $61,835. CD 6/26—ENR 6/29.

†N. J., Linden—Pub. Housing Auth., NHA, 270 Bway., New York, 7, N. Y., sanitary sewerage sys. at housing N.J. 28071, to Conduit Foundation Corp., 770 S. Schuylkill Ave., Phila., Pa., $71,368.

†Va., Quantico—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., bakery bldg., Marine Barracks, NOY 8938, to J. D. Hedin Constr. Co., 618 Michigan Ave. N.E., Wash., 17, D. C., $173,800. Bids 7/7.

†Va., Yorktown—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., MK 8 depth charge testing bldg., NMD, NOY 9113, to Virginia Engineering Co., Inc., Nelson Bldg., Newport News, $321,343.

†Wash., Bremerton—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25 D. C., boiler, central power plant, Navy Yard, NOY 8142, to C. C. Moore & Co., 450 Mission St., San Francisco, Calif., $147,778.

★†Wash., Spokane—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D.C., general storehouses and appurtenant work, Navy Supply Depot, NOY 9435, to Western Constr. Co., 605 Arctic Bldg., Seattle, $1,723,000. CD 7/18, under L. B.—ENR 4/27.

★†Wyo., Sheridan—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash., 25, D. C., addnl. hospital bldgs. to Francis R. Orsnek Co., Fremont, Neb., $576,700. Bids 7/18. CD 7/20—ENR 7/27, under LB.

N. B., St. John—Wartime Housing Ltd., 55 York St., Toronto, Ont., 50 addnl. houses, Mill Pond site, to Acme Constr. Co., Ltd., 45 Canterbury St., about $220,000. CD 6/5—ENR 6/8.

Ont., Oshawa—Wartime Housing, Ltd., 55 York St., Toronto, 75 semi permanent houses, to Redfern Constr. Co., Ltd., Excelsior Life Bldg., Toronto, approx. $325,000.

COMMERCIAL BUILDINGS

PROPOSED WORK

Ark., Little Rock—First Church of Christ, 12 and Thayer Sts., plans by Brugeman, Swain & Allen, Gazette Bldg., 2 story, masonry, steel, concrete church and Sunday School. $425,000.

Ga., Atlanta—Montclair Apartments, Inc., c/o A. Thos. Bradbury, archt., Wm. Oliver Bldg., 3 story, brick apartment bldgs., Clairmont and N. Decatur Rds. $200,000. CD 7/25—ENR 7/27.

Md., Towson—Loyola High School, Boyce Ave. west of Charles Ave., plans by John A. Ahlers, 817 N. Charles St., Baltimore, 3 story, 100x125 ft. gymnasium, and 75x150 ft. rein.-con. swimming pool. $175,000.

Mo., Rolla—South Central Missouri Hospital Assn., Rolla, plans by E. T. Friton, Security Bldg., St. Louis, hospital. $354,000. Applied to FWA.

Tex., San Antonio—National Hotel Co., Anico Bldg., Galveston, plans by Andrew S. Fraser, 624 Am. Natl. Ins. Bldg., Galveston, imprv. 6 story hotel. $150,000.

BIDS ASKED

Bids Asked August 7

Que., Longueuil—Catholic School Comm., c/o P. A. A. Dufresne, secy., 13 St. Charles St., constructing Chemin du Lac School, Boulevard St. Helene School and St. Charles School addn. $150,000. Anastace Gravel, archt., and Emilien Langerin, engr., both at 513 Rachel St., Montreal.

MMERCIAL BLDGS. (Bids Asked, Cont'd.)

Bids Asked Probably Next February

Pa., Lemoyne—Wenner & Fink, archts. 91 Arch St., Phila., church, 2 story, 36x86 main church room, 35x70 ft. social hall, 50 ft. chapel and tower, and 32x38 ft., ance and lobby, for Lemoyne Trinity angelical Lutheran Church, c/o Rev. S. Frey, 517 Hummel Ave. $125,000.

Bids Asked

Ont., Windsor—J. C. Pennington, archt., anadian Bank of Commerce Bldg., 41x67 ft., t 41x154 ft. brick nurses' residences and ining center, 1014 Ouelette Ave., for Sis- s of Hotel Dieu, 1014 Ouelette Ave. $50,000. CD 3/13.

ONTRACTS AWARDED

Calif., San Mateo—Newbridge Park Realty , 1182 Market St., San Francisco, first 73 eventual 125 to 139 1 story, frame dwell- s, Ontario and Norfolk Sts., 2 Ave., and aron Place, to Belle Haven Realty Co., 82 Market St., San Francisco, $5,000 each. J. Joseph, 1182 Market St., San Francisco, rcht.

Conn., Stratford—Tano Enterprises, Inc., os. B. Frouge, pres., 74 Goodsell St., idgeport, brick, steel theatre, Boston and ce Aves., to Merritt Building Co., Inc., Goodsell St., Bridgeport. Est. $200,000. D 7/21—ENR 7/27.

Tex., Port Arthur—Jefferson Home Build- s, Port Arthur, 50 residences, to Selmar orp., 800 Duff Dr.; 42 residences to dependent Lumber Co.; 53 residences to A. Hays, all in Port Arthur. Total $438,000. Knostman, 2017 W. Gray Ave., Houston, rcht.

N. S., Halifax—Knights of Columbus, 596 ussex St., Ottawa, Ont., and Dpt. National efense, Ottawa, Ont., reconstructing hostel, olls and Fanson Sts., constructing recrea- on centre and hostel, Contr. 23-H1-105, to E. Farley, 30 Russell Ave., Ottawa, Ont., 74,000. CD 5/10.

Que., Baie Comeau—Crawley & McCracken, td., and Quebec North Shore Paper Co., 630 herbrooke St., W., Montreal, reconstruct- g La Salle Hotel, to Foundation Co. of anada, Ltd., 1539 Sherbrooke St. W., Mon- eal, approx. $200,000. CD 3/28—ENR 4/13.

INDUSTRIAL BUILDINGS

ROPOSED WORK

Minn., Fergus Falls—CREAMERY—Fer- us Dairy Co-op., Fergus Falls, plans by linger, Hubbard &-Gohn, engrs. and archts., 18 S. Barstow St., Eau Claire, 1 story, art bsmnt., creamery addn.

N. J., Ridgefield—LABORATORY, etc.—Union Ink Co., Route 17, East Rutherford, 2 tory, brick, steel laboratory and mfg. plant.

N. C., Charlotte—WAREHOUSE—Ameri- an Bakeries Co., 10 Pryor St. S.W., Atlanta, a., soon lets contract storage warehouse. urge & Stevens, Palmer Bldg., Atlanta, a., engrs.-archts.

N. C., Charlotte — WAREHOUSE — Pied- mont Feed Mills, Inc., J. W. Maxwell, secy.- reas., 310 Dunavent St., rebuilding ware- ouse. $40,000-$50,000.

N. C., Charlotte—COLD STORAGE BLDG. Standard Ice & Fuel Co., 700 West 9 St., laarging cold storage facilities, cold stor- ge bldg. addn., imprvs. $100,000.

S. C., Saluda—POWER PLANT, etc.—outh Carolina Electric & Gas Co., Columbia, oon lets contract, power plant addn., and pillway bridge.

★Tex., Bowie—PLANT—Continental Oil Co., Ponca City, Okla., gas repressing lant, 600 hp. compressor, capable of han- ling 4,000,000 cu. ft. gas daily, 7 mi. north- ast of here. $750,000.

★Tex., Houston—PLANT—Shell Oil Co., Inc., Shell Bldg., soon lets contract hemical plant. $1,000,000. CD 7/27.

Tex., Lubbock—STORAGE—A. L. Ferguson, uto Supply Co., soon lets contract 125x140 t., brick, steel, concrete supply and storage ldg. Over $40,000. Haynes & Strange, 415 yrick Bldg., archts. CD 7/11—ENR 7/13.

Tex., Madisonville—PLANT—General Box Co., Madisonville, plant. $40,000.

Tex., New Braunfels—MILL—New Braun- fels Textile Cottons Mills, W. Dillard, vice res., New Braunfels, 1 story, 50x150 ft. ill with 116 loom capacity. Roberts & Co., Bona Allen Bldg., Atlanta, Ga., engrs. CD 7/26.

Utah, Salt Lake City—WAREHOUSE, etc. —Arnold Machinery Co., 153 W. 2nd S St., warehouse and office bldg. $100,000.

Wis., Green Bay—PASSENGER DEPOT—Chicago, Milwaukee, St. Paul & Pacific R. R. Co., W. H. Penfield, ch. engr., Union Sta., Chicago, Ill., 1 and 2 story, 40x140 ft., brick, concrete passenger depot, concrete fdn., etc.

Wis., Pepin—CREAMERY—Lake View Dairies, Inc., Pepin, plans by Boyum, Schubert & Sorenson, Winona, Minn., brick, tile, rein.-con. creamery. $40,000.

B. C., Vancouver—STORAGE—Wing Lee Co. Ltd., c/o 241 Keefer St., plans by Gardiner & Thornton, 718 Granville St., 2 story, full bsmnt., 124x165 ft., rein.-con. storage and distr. bldg. $125,000.

Newfoundland, Baie Verte—MINE DEVELOPMENT—Rambler Mines, Ltd., Baie Verte, sinking shaft, constructing 6¼ mi. roadway to tide water, mill, 250 tons ore daily, staff house, living quarters, etc. $300,000.

Ont., Windsor—PLANT—Purolator Products, Ltd., c/o G. P. Dickson, K. C. Windsor, plant. $50,000.

Que., Kenogami — PAPER MILL — Price Bros. Co., Ltd., 65 Ste. Anne St., Quebec City, remodeling portion paper mill. $40,000.

Que., La Providence—PLANT—O. Jacques, Ltd., 1 St. Michel St., organ mfg. plant. $50 000.

BIDS ASKED

Bids Asked August 7

N. J., Elizabeth—PLANT—Linde Air Products Co., 796 Frelinghuysen Ave., Newark, mfg. bldg. addn. and garage.

Bids Asked August 8

Minn., Winthrop—PLANT—Tri County Dairy Corp., 1 and 2 story, 87x140 ft., brick, tile milk dehydrating plant. Plans deposit $15. Klinger, Hubbard & Gohn, 218 S. Barstow St., Eau Claire, engrs. and archts. CD 6/7—ENR 6/22.

N. C., Winston Salem—PLANT—Swift & Co., c/o E. K. Emerson, Construction Dpt., Union Stock Yards, Chicago, Ill., 2 story, bsmnt., brick, rein.-con. plant addn.

Man., Portage la Prairie—MILL—Secretary Dpt. P. Wks., Ottawa, Ont., pilot flax mill. $45,000. Plans deposit $25.

Bids Asked About August 15

N. J., Berkeley Heights—FACTORY—Manufacturing Chemical Co., Snyder Ave., 1 story, masonry factory addn. R. A. Throenig, 42 Belleville Ave., Bloomfield, archt. CD 5/1—ENR 5/11.

Bids Asked August 15

Tex., Fort Worth—PLANT—Hobbs Mfg. Co., 609 N. Main St., approx. 200x300 ft. mfg. plant. C. H. Page, P. O. Box 936, Austin, archt.

Bids Asked

Conn., Stamford—WAREHOUSE—American Cyanamid Co., 1937 W. Main St., 1 story, brick, concrete Warehouse 3.

Pa., Phila. — TERMINAL — Associated Transport, Inc., c/o A. J. Carson, archt., 325 Memorial Ave., West Springfield, Mass., terminal addn., G St., incl. grading, 4 acre site, constructing roadways, steel and wire fence, freight facilities garage. Over $40,000.. CD 6/21—ENR 6/29.

Que., La Tuque — PLANT — Brown Corp., La Tuque, 70x242 ft. and 58x121 ft. brick, steel, concrete stores and shop bldgs. $100,000. R. A. Rankin & Co., 1420 Sherbrooke St., W., Montreal, engrs.

CONTRACTS AWARDED

Calif., Monterey — CANNERY—Enterprise Packers, S. Belleci, pres. c/o J. A. Thomsen, P.O. Box 68, Monterey, 1 story, 100x160 ft., frame, stucco cannery, separate contracts, under supervision A. B. Coats, 930 Jefferson St. $200,000.

Conn., Bridgeport—FACTORY—Metropolitan Body Co., 151 Kossuth St., 1 story, 55x150 ft., cinder block factory, Kossuth St., to Gellatly Constr. Co., 35 Housatonic Ave. Est. $40,000. CD 7/25—ENR 7/27.

Md., Sparrows Point (br. Baltimore)—PLANT — Bethlehem Steel Co., Sparrows Point, 90x535 ft. slab yard, 90x275 ft. spare bldg., 40x58 ft. mill bldg., 40x65 ft. furnace bldg., all steel frame, brick, own forces. $200,000. T. Wilson, acting ch. engr.

Mass., Brighton—PLANT—A J Auto Ignition Co., 5 Brighton Ave., 1 story, 75x125 ft., brick plant, to M. Slotnick Co., 333 Washington St., Boston. Est. $40,000. Sumner Schein, 333 Washington St., Boston, archt.

Mich., Alma—OIL REFINERY—Leonard Refinery Co., Alma, oil refinery, brick, steel, concrete, to Spence Bros., 201-204 Brewer Arcade, Saginaw. Est. $100,000. W. Knapp, 730 Buhl Bldg., Detroit, archt.

Mich., Detroit—PLANT—Steel Cooperage & Coating Co., 4001 Beaubien St., altering, addns. to and rebuilding brick, concrete plant bldgs. to Krieghoff Co., 6461 French Rd. Est. $50,000.

Mich., Flint — MACHINE SHOP — Buick Motor Division, General Motors Corp., Flint, brick, steel, concrete machine shop bldg. and power house addn., to J. A. Utley Co., 723 E. Ten Mile Rd., Royal Oak. Est. $150,000.

Mo., St. Louis — FACTORY — American Bearing Corp., 4501 Fyler Ave., 1 story, 120x140 ft. brick, factory, concrete fdn., to Fruin-Colnon Contg. Co., 520 Merchants Laclede Bldg., 408 Olive St. Est. incl. equip. $40,000. P. R. Ramsay, Webster Groves, St. Louis, 19, archt.

Mo., St. Louis — TRUCK TERMINAL — Dohrn Transfer Co., 720 Mound St., 1 story, 40x105 ft., brick truck terminal, concrete fdn., to Murch-Jarvis Co., Inc., 718 Locust St., Zone 1. Est. incl. equip. $40,000. Van Hoefen, Froese & Maack, 705 Olive St., archts. (Correction—CD contractor and architects.) CD 6/19—ENR 6/22, under CA.

N. J., Mountain Lakes—PLANT—Standard Railway Co., Manny Rd., 50x80 ft., 50x90 ft. and two 25x35 ft. brick, steel mfg. bldgs., to Wortmann & Sons, 109 E. 29 St., New York, N. Y., $50,000. CD 7/25—ENR 7/27.

N. J., Perth Amboy—PLANT—Welin Davit & Boat Corp., 500 Market St., 2 story, brick, steel utility and service bldg., to Wm. L. Blanchard Co., 45 Poinier St., Newark, $45,000. CD 7/3—ENR 7/6.

N. J., Piscataway (P. O. Bound Brook)—PLANT BLDG., etc.—Bakelite Corp., 30 E. 42 St., New York, N. Y., altering cafeteria, gate house addn., yard imprvs., to Marius Pedersen & Son, 230 Hobart St., Perth Amboy, over $40,000. Francisco & Jacobus, 511 5 Ave., New York, N. Y., archts.

N. J., Toms River—FACTORY—H. Clay Glover Co., 9 Robbins St., 2nd and 3rd floor brick factory top addns., to Ehret-Day Co., 601 Mattison Ave., Asbury Park, $40,000.

Pa., New Kensington — FACTORY — Aluminum Co. of America, R. O. Keefer, purch. agt., Gulf Bldg., Pittsburgh, 2 story, part bsmnt., 75x200 ft., brick, steel frame factory 17 addn., separate contracts. $200,000. Owner taking bids on site preparation and piping. CD 1/18—ENR 1/20.

Pa., Phila. — WORKSHOP — Fruehauf Trailer Co., 1605 N. Front St., 1 story, brick, steel workshop, to Collins Co., 1605 N. Front St., $120,000.

Pa., Phila. — STORAGE — International Chemical Co., 2642 N. Mascher St., brick, steel, storage bldg., to S. H. Levin, 1717 Sansom St., $50,000. Awarded 7/24.

Pa., Pittsburgh—GARAGE—Motor Express, Inc., K. P. Stough, in charge, 1434 Metropolitan St. N.S, rebuilding 1 story, 50x140 ft., steel frame, storage garage, to Martin & Nettrour Contg. Corp., 605 Diamond Bank Bldg. CD 7/19—ENR 7/27.

★Pa., Scotia—PLANT—Scotia Mining Co., Port Matilda, design and construction ore processing plant, to Arthur G. McKee & Co., 2300 Chester Ave., Cleveland, O. Est. $500,000.

★Tex., Columbus — CYCLING PLANT — Shell Oil Co., Inc., P. O. Box 2099, Houston, Zone 1, design and construction, cycling plant, having 100,000,000 cu. ft. gas daily cap., to Petroleum Engineering, Inc., Commerce Bldg., Houston, approx. $1,750,000.

Tex., Houston—PLANT—Southwest Wheel, Inc., 1433 Travis St., 1 story, 150x150 ft. plant addn., to Base-Marshall Co., 4009 Center St., $51,270. CD 7/19—ENR 7/27.

Tex., Lubbock — WAREHOUSE, etc. — Luther Transfer & Storage Co., Lubbock, 1 story, bsmnt. warehouse and storage bldg., to J. D. Letfwich, Lubbock, $49,967. Haynes & Strange, 415 Myrick Bldg., archts. CD 7/13—ENR 7/20.

Tex., Pasadena—SILOS—Southern Acid & Sulphur Co., Wallisville Rd., Houston, 9 rein.-con., steel silos, 1 mi. south of here, to Jones-Hettelsater Constr. Co., Mutual Bldg., Kansas City, Mo., $100,000. CD 7/26.

Tex., San Antonio—TERMINAL STORAGE, etc.—Greyhound Lines, Inc., 808 Navarro St., San Antonio, and 905 Commerce St., Fort Worth, terminal storage and loading station, to A. P. Rheiner & Co., Insurance Bldg., approx. $70,000. Morris & Noonan, Am. Hos. & Life Ins. Co. Bldg., archts. CD 7/26.

Tex., Wichita Falls—PLANT—Continental Oil Co., Wichita Falls, alkylation plant imprvs., force account, $100,000. CD 6/22—ENR 6/29.

Wis., Lancaster—STORAGE—Motter Produce Co., 1 story, part bsmnt., 50x100 ft., frame, storage bldg., concrete fdn., day labor. Law, Law, Potter & Nystrom, 121 S. Pinckney St., Madison, archts.

Wis., Racine — BOTTLING WORKS — Kohlman's Inc., 1009 Villa St., 1 story, part bsmnt., 80x80 ft., brick, concrete block bottling works addn., to L. S. Jones & Son, Inc., 1013 Villa St. F. J. Hoffman, 201 6 St., archt.

Wis., Ridgeland—DAIRY—Sanna Dairy Engineers, 110 E. Main St., Madison, remodeling dairy for milk processing plant, to J. H. Findorff & Son, 601 W. Wilson St., Madison. Est. $65,000. Mead, Ward & Hunt, 550 State St., Madison, engrs.

Wis., River Falls—PLANT—River Falls Coop Creamery Assn., River Falls, brick, tile, powdered milk plant, to J. S. Sweitze & Sons, Inc., 739 Pillsbury Ave., St. Paul, Minn. Est. $50,000. Slifer & Cone, Endicott Bldg., St. Paul, Minn., archts.

Que., Montreal—PLANT—Poirier Bessette & Co., Ltd., 975 du Bullion St., printing plant addn., 973-983 de Bullion St., to J. P. Desrochers Co., Ltd., 59 Strathearn Ave., Montreal West, $40,000. CD 6/30—ENR 7/6.

INDUSTRIAL BLDGS. (Contracts Awarded, Cont'd.)

★**Que., Montreal East (Postal Dist. Montreal)** — PLANT — Canadian Copper Refineries Ltd., Duroches Ave., copper sulphate plant, to Foundation Co., Ltd., 1538 Sherbrooke St., W., Montreal, approx. **$500,000.** CD 3/22—ENR 3/30.

UNCLASSIFIED

PROPOSED WORK

Calif., Los Angeles — GAS PIPELINE — Southern California Gas Co., 810 S. Flower St., installing 8 to 9 mi. 12 in. gas pipeline in San Fernando Valley. Owner furnishes pipe. Over $25,000.

Conn., Bridgeport — AIRPORT — City, J. McLevy, mayor, City Hall, making plans miscellaneous airport repairs. $100,000.

Conn., New Haven—AIRPORT—City, Airport Comn., F. I. Newton, chn., City Hall, imprv. airport. $55,000.

★**Ill., Chicago**—AIRPORT BLDG.—Group of 8 Airlines, Municipal Airport, plans by Shaw, Naess & Murphy, 80 E. Jackson Blvd., terminal bldg., at Municipal Airport. $950,000-$1,250,000.

†**La., Golden Meadow**—WHARF—U. S. Eng., foot Prytania St., New Orleans, 30x90 ft., timber whaff on piling found., near here. Over $25,000.

★**N. Y., Idlewild**—AIRPORT PAVING—Dpt. Marine & Aviation, Pier A, North River, New York, Zone 4, making plans 1st sect. paving airport. $900,000. J. Downer, 30 Rockefeller Plaza, New York City, Zone 20, engr.

North Carolina—PARK—State Dpt. Conservation & Development, Raleigh, B. Etheridge, dir., 235 acres state park, Wayne Co. Over $25,000.

N. C., New Bern—PARK, etc.—State Dpt. Conservation & Development, R. Bruce Ethridge, dir., Raleigh, state park and restoration of Gov. Tryon's Palace. $100,000 gift. Will seek additional funds for acquisition of Tryon Palace site.

Okla., Guymon—GAS LINES—Cities Service Gas Co., SE of City, Oklahoma City, 15.2 mi. 4- to 20-in. gathering gas lines. $63,000.

Okla., Healdton — OIL PIPELINE — Pure Oil Co., 118 W. 6 St., Tulsa, laying crude oil gathering line and constructing storage facilities. Over $25,000.

Okla., Tulsa—AIRFIELD BUILDINGS—Southwest Airways Co., Love Field, Dallas, Tex., airfield bldgs. for 2 way route. Over $40,000.

S. D., Aberdeen—AIRPORT BLDG.—Lydia W. Kohlhoff, city aud., plans by G. W. Shimet, 83 S. 9 St., Minneapolis, Minn., administration bldg. at municipal airport. $50,000.

Tex., Amarillo—AIRFIELD FACILITIES—Southwest Airways Co.,, Love Field, Dallas, airport facilities for 2 way route. $40,000.

Tex., Athens—DAMS and SPILLWAYS—Koon Kreek Klub, c/o O. N. Floyd, engr., 1207 Texas Bank Bldg., Dallas, soon lets contract repairing earthern dams and 2 new spillways, incl. approx. 42,000 cu. yd. excav., 1,500 cu. yd. concrete, 17,000 lb. rein.-con. steel, sand, etc.

Tex., Dallas—AIRPORT BLDGS.—Southwest Airways Co., Love Field, bldgs., facilities for establishing 7-route sys. from here. Over $150,000. Applied to CAA.

Tex., Falfurrias—GAS WELL—Sun Oil Co., Esperson Bldg., Houston, developing 6,000 ft. gas-distillate well, 1 mi. south of here. Over $25,000.

Tex., Fort Worth—AIRFIELD BUILDINGS—Southwest Airways Co., c/o Love Field, Dallas, bldgs. and facilities to operate 5 way route out of Fort Worth. $150,000. CAA has application.

Tex., Houston—AIRFIELD BUILDINGS—Southwest Airways Co., Love Field, Dallas, airfield bldgs. and facilities, for 7 way route out of Houston. $150,000. CAA has application.

†**Tex., Rockport**—AIRPORT LIGHTING—Civil Aeronautics Admin., P. O. Box 1689, Fort Worth, Zone 1, bids soon lighting Aransas Co., Texas Airport. Plans deposit $10. CD 6/14/43—ENR 6/7/43.

Tex., San Antonio—AIRFIELD BUILDINGS—Southwest Airways Co., c/o Love Field, Dallas, bldgs., facilities to operate 5 route sys. from San Antonio. Over $150,000. CAA has application.

Wyoming and Colorado—OIL PIPELINE—Utah Oil Refining Co., Utah Oil Bldg., Salt Lake City, 111 mi. 6 in. crude oil pipeline from Iles field in Colorado connecting with owners trunk line in Wyoming. Over $100,000.

N. B., St. John—PARKS and PLAYGROUNDS—Municipality, C. R. Wasson, mayor, parks and playgrounds. $140,000.

Ont., Cornwall—AIRPORT—City, J. G. Cameron, chn. Town Planning Comn., airport. $70,000. N. G. Wilson, 128 Gen Rd., Toronto, engr.

Ont., Kingston—DOCK—Queens University Governors, Kingston, dock exten. $28,000.

Ont., Kirkland Lake—RAILWAY CLEARING, etc.—Temiskaming & Northern Ontario Ry. Comn., S. B. Clement, ch. engr., North Bay, soon lets contract clearing, grading 1.1 mi. diversion of main line between M.P. 57.6 and 58.7-Kirkland Lake Subdivision. About $40,000.

Ont., Owen Sound—HARBOR DEVELOPMENT—Francis Farwell, Owen Sound, harbor development, south side Griffiths Island. $50-000.

Que., Dorval—AIRPORT DEVELOPMENT—Dpt. Transport, Ottawa, Ont., addnl. airport development, concrete hangar aprons, roads. $400,000.

BIDS ASKED

Bids Asked August 7

N. Y., New York — TEST BORINGS — President Manhattan Boro, Municipal Bldg., Zone 7, Contr. 47, test borings in connection with construction elevated public highway with ramp approaches along waterfront of East River between E. 23 and E. 40 Sts.

Bids Asked August 8

†**W. Va., Parkersburg**—AIRPORT IMPROVEMENTS—Clerk Wood Co., Court House, airport imprvs., incl. grading 2,300,000 cu. yd., 34,500 lin. ft. drainage, etc., Route 2, at Williamstown Pike, approx. 8 mi. north of here. $1,600,000. CAA. CD 7/7—ENR 7/13.

Ont., Ottawa—SPRINKLERS AND FIRE ALARM SYSTEM—Secretary Dpt. P. Wks., Ottawa, Ont., automatic sprinklers and fire alarm sys., Wartime Prices and Trade Board Bldg., Sussex St., $150,000. Plans deposit $15.

Bids Asked August 9

★**N. Y., Idlewild**—AIRPORT GRADING—Dpt. Marine & Aviation, Pier A, North River, New York, Zone 4, Contr. 6, grading, incl. approx. 2,500,000 cu. yd. fill, at airport. $1,000,000. J. Downer, 30 Rockefeller Plaza, New York City, Zone 20, engr.

Bids Asked August 16

Tex., Houston — UNDERGROUND ELECTRIC CABLE FACILITIES—City, underground electric cable facilities or connecting network of water supply wells, etc. Over $25,000. G. L. Fugate, City Hall, engr.

Bids Asked August 18

Tex., College Station—WIND TUNNEL—Bd. Directors Agricultural & Mechanical College Station, wind tunnel. Plans deposit $25. W. E. Simpson Co., Milam Bldg., San Antonio, engrs. CD 4/28/43—ENR 4/30/43.

Bids Asked

†**Mass., Newton (br. Boston)**—GRADING—U. S. Eng., 31 St. James Ave., Boston, (selected list bidders), grading No. 19-023-45-NEG 9, $7,500.

Ont., Welland—ARENA—D. W. Lathrop, chn. Health & Recreation Centre, Edgar St., 154x275 arena on King St., ice plant, etc., for city. $150,000. N. Kearns, 147 Division St., archt. CD 6/16—ENR 6/22.

LOW BIDDERS

†**Montana** — TRANSMISSION LINE — Bureau Reclamation, Fort Peck, July 15, 115 kilovolt transmission line from Fort Peck power plant to Glendive and 34.5 kilovolt transmission line from Frazer to Wolf Point from Rue Contg. Co., Fargo, N. D., **$105,553** and **$112,742** respectively. CD 6/20—ENR 6/22.

★†**O., Springfield**—AIRPORT CLEARING, etc.—Civil Aeronautics Admin., 608 S. Dearborn St., Chicago, Ill., July 21, airport clearing and grubbing, grading, underdrains, etc., from Lewis & Frisinger, Julius Porath and E. B. Schwaderer, Ann Arbor, Mich., **$1,213,810.** CD 7/12—ENR 6/29.

CONTRACTS AWARDED

†**Alabama**—AIR DEPOT BLDG.—U. S. Eng., Grant St., west of Westwood St., Mobile, engine test bldg., at air depot, Mobile Co., to Huffman-Wolfe Co., Standard Bldg., Atlanta, Ga., **$221,000.**

California — GAS PIPELINE — Southern California Co., 810 S. Flower St., Los Angeles, 55,000 lin. ft. 22 in. steel gas pipeline from Hackett to Hollywood Holder Sts. (pipe furnished by owner), to Macco-Robertson Co., 811 Paramount Blvd., Clearwater, **$200,000.**

★†**Ill., Decatur** — AIRPORT — Civil Aeronautics Admin., 608 S. Dearborn St., Chicago, airport, 3 concrete runways, grading, storm sewers, fencing, etc., to M. J. Boyle & Co., 1744 N. Mozart St., Chicago, **$1,307,290.** Bids 7/7. CD 7/11—ENR 7/13.

†**Kan., Liberal**—HANGAR—U. S. Eng., 10 E. 17 St., Kansas City, Mo., hangar, Auxiliary Airfield, Contr. W-25-075-eng-1589, to Martin K. Eby Constr. Co., 311 E. Murdock St., Wichita, **$58,295.**

†**La., New Orleans** — HEATING PLANT UNIT — Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D.C., heating plant unit at Bldg. 9, Naval Air Station, NOY 10296, to McDonough Constr. Co., P. O. Box 239, **$111,252.** Bids 7/15.

†**Md., Baltimore**—TRACK WORK—U. S. Eng., Standard Oil Bldg., addnl. track work, Curtis Bay Ordnance Depot, Contr. W-18-020-eng-558, to Arundel Corp., Pier 2, Pratt St., **$96,218.**

Mississippi — DAM AND SPILLWAY — State Bd. Park Supervs., c/o A. A. Leggett, Jackson, constructing section of dam and spillway in Percy Quin State Park, Pike Co., to Mosspoint Constr. Co., Moss Point, and J. A. Alexander, Hattiesburg. Est. **$60,000.** Bids 7/25. Owner furnishes sheet steel piling. T. W. Robbins, McComb, engr.

Nebraska—TRANSMISSION LINES—Cuming County Rural Pub Power Dist., R. C. Graff, pres., West Point, 52.2 mi. transmission lines, to Schneider Electric Works, 1108 Farnam St., Omaha, **$61,490.** Bids 7/13. CD 6/22—ENR 6/29.

N. J., Butler — ATHLETIC FIELD — Bd. Educ., Barthold Ave., athletic field, to J. P. Burns, Knickerbocker Rd., Cresskill, **$30,100.**

†**N. J., Earle**—CRANE SHED—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., locomotive crane shed at pier area and brig, Naval Ammunition Depot, Spec. 14810, NOY 10400, to Corbetta Const. Co., Inc., and Walsh Const. Co., P. O. Box 653, Red Bank, **$106,700.**

★**N. Y., Idlewild**—AIRPORT FILL—Dpt. Marine & Aviation, Pier A. North River, New York, Zone 4, 8,500,000 cu. yd. fill, Contr. 5, Idlewild Airport, to Atlantic, Gulf & Pacific Co., 1300 Park Row, New York, Zone 7, **$1,341,950.** Bids 7/10. CD 7/13—ENR 7/20, under LB.

†**O., Wright Field (br. Dayton)** — AIRFIELD BLDGS.—U. S. Eng. Dayton, flight section shop, Contr. W-33-046-eng. 141, and bldg. addn. Contr. W-33-046-eng-142, to Frank Messer & Sons, Inc., 2515 Burnet St., Cincinnati, **$96,433** and **$63,900** respectively.

Oklahoma and Kansas—OIL PIPELINE—Stanolind Pipe Line Co., NE 36 and Jordan Sts., Oklahoma City, Okla., laying 14 mi. 16 in. loop crude oil pipeline between Havana, Kan. and Hula, Okla., also 6 mi. 16 in. loop pipe in Wynona area, to C. S. Foreman Co., Drumright, Okla., **$86,000;** laying 6 mi. 16 in. loop crude oil pipeline in Wynona area, also 14 mi. 16 in. line between Drumright, Okla. and Sycamore, Kan., to Jones & Brooks, Insurance Bldg., Oklahoma City, Okla., approx. **$90,000.** CD 7/19—ENR 7/29.

Oklahoma and Texas—GAS LINE—Phillips Petroleum Co., Bartlesville, Okla., 16 mi. 4- to 24-in. natural gas lines in Guymon, Okla. and Hansford County, Tex., to Fulton Constr. Co., Esperson Bldg., Houston, Tex., **$235,000.**

Oklahoma—GAS PIPELINE—Cities Service Gas Co., SE of City, Oklahoma City, 16 in. natural gas pipe river crossing between Blackwell and Burbank, to Oil States Constr. Co., Tulsa Loan Bldg., Tulsa, **$30,000.** CD 7/13—ENR 7/20.

†**Pa., Coraopolis**—HANGAR—U. S. Eng., Standard Oil Bldg., Baltimore, Md., hangar bldg., Contr. W-18-020-eng-553, Moon Twp. Airport, to Trimble Co., 1719 Penna. Ave., Pittsburgh, **$63,010.**

†**S. C., Charleston** — RAILROAD SPUR, etc.—U. S. Eng., Post Office Bldg., Savannah, Ga., railroad spur and hospital car storage yard, Stark General Hospital, STAR 3-43, to V. P. Loftis, Builders Bldg., Charlotte, N. C., **$138,925.** Bids 7/25.

★**Pa., Enola**—CAR RETARDERS—Pennsylvania R. R., J. L. Gressitt, ch. engr., Broad St. Station Bldg., Phila., car retarders in Enola westbound classification yard, to Ferguson & Edmondson, Keystone Bldg., Pittsburgh, **$2,500,000.**

†**Pa., Middletown** — AIRFIELD BLDGS, etc.—U. S. Eng., Standard Oil Bldg., Baltimore, Md., bldg. addns., Olmsted Field, Middletown Air Depot, Contr. W-18-020-eng-546, and officers quarters addns., Middletown Air Depot, Contr. W-18-020-eng-545, to Ritter Bros., 1511 N. Cameron St., Harrisburg, **$146,600** and **$42,967** respectively.

Tex., Ozona — OIL PIPELINES — Texas-New Mexico Pipe Line Co., Ozona, 17 mi. 6 in. crude oil pipeline from field to plant, also 13 mi. 4 in. crude oil gathering lines in vicinity Ozona Pool, force account, **$70,000** and **$45,000** respectively. CD 7/20—ENR 7/27.

†**Tex., Midland**—RUNWAY—U. S. Eng., Fort Sam Houston, east-west runway at Midland Municipal Airport, 2, Spec. 1145, to Thomas & Ratliff, Rogers, **$207,875.** CD 6/30—ENR 7/6.

†**Wash., Shelton**—RUNWAY SURFACING—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., surfacing runway and taxi shoulders, Naval Auxiliary Air Station, Noy 10497, to S. Birch & Sons Constr. Co., Great Falls, Mont., **$71,500.** CD 4/17—ENR 4/27.

Man., Virden—AERODROME DEVELOPMENT—Dpt. Transport, Ottawa, Ont., aerodrome development, grading, stripping, rolling, draining, parking area construction, concrete slabs, etc., to Claydon Co., Ltd., 290 Garry St., Winnipeg. Est. **$56,000.** Bids 6/7. CD 6/1.

Proposal Advertisements see p. 19